



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 52 and 81**

**[EPA-R09-OAR-2012-0877;FRL-9837-6]**

**Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; State of California; PM<sub>10</sub>; Redesignation of Sacramento to Attainment; Approval of PM<sub>10</sub> Redesignation Request and Maintenance Plan for Sacramento**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** EPA is proposing to approve, as a revision of the California state implementation plan, the State's request to redesignate the Sacramento nonattainment area to attainment for the 24-hour particulate matter of ten microns or less (PM<sub>10</sub>) National Ambient Air Quality Standard (NAAQS). EPA is also proposing to approve the PM<sub>10</sub> maintenance plan and the associated motor vehicle emissions budgets for use in transportation conformity determinations necessary for the Sacramento area. Finally, EPA is proposing to approve the attainment year emissions inventory. EPA is proposing these actions because the SIP revision meets the requirements of the Clean Air Act and EPA guidance for such plans and motor vehicle emissions budgets.

**DATES:** Comments must be received on or before [Federal Register: Insert date 30 days after the publication date].

**ADDRESSES:** Submit your comments, identified by Docket ID Number EPA-R09-OAR-2012-0877, by one of the following methods:

1. <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.

2. Email: [ungvarsky.john@epa.gov](mailto:ungvarsky.john@epa.gov)

3. Mail or deliver: John Ungvarsky (AIR-2), U.S.

Environmental Protection Agency, Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901. Deliveries are only accepted during the Regional Office's normal hours of operation.

*Instructions:* All comments will be included in the public docket without change and may be made available online at

<http://www.regulations.gov>, including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through <http://www.regulations.gov> or email. <http://www.regulations.gov> is an anonymous access system, and EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send email directly to EPA, your email address will be automatically captured and included as part of the public comment. If EPA cannot read your comment due to technical difficulties and

cannot contact you for clarification, EPA may not be able to consider your comment.

*Docket:* The index to the docket and documents in the docket for this action are generally available electronically at [www.regulations.gov](http://www.regulations.gov) and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed at [www.regulations.gov](http://www.regulations.gov), some information may be publicly available only at the hard copy location (e.g., copyrighted material, large maps), and some may not be publicly available in either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

**FOR FURTHER INFORMATION CONTACT:** John Ungvarsky, Air Planning Office (AIR-2), U.S. Environmental Protection Agency, Region IX, (415) 972-3963, [ungvarsky.john@epa.gov](mailto:ungvarsky.john@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

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## I. Summary of Today's Proposed Action

Under Clean Air Act (CAA or "the Act") section 107(d)(3)(D), EPA is proposing to approve the State's request to redesignate the Sacramento PM<sub>10</sub> nonattainment area to attainment for the 24-hour PM<sub>10</sub> National Ambient Air Quality Standard (NAAQS or "standard"). We are doing so based on our conclusion that the area has met the five criteria for redesignation under CAA section 107(d)(3)(E): 1) that the area has attained the 24-hour PM<sub>10</sub> NAAQS in the 2010-2012 time period and that the area continues to attain the PM<sub>10</sub> standard since that time; 2) that relevant portions of the California state implementation plan (SIP) are fully approved; 3) that the improvement in air quality is due to permanent and enforceable reductions in emissions; 4) that California has met all requirements applicable to the Sacramento PM<sub>10</sub> nonattainment area with respect to section 110 and part D of the CAA; and 5) that the *PM<sub>10</sub> Implementation/Maintenance Plan and Redesignation Request for Sacramento County* (October 28, 2010) ("Sacramento PM<sub>10</sub> Maintenance Plan" or "Plan")<sup>1</sup> meets the requirements of section 175A of the CAA.

In addition, under CAA section 110(k)(3), EPA is proposing to approve the maintenance plan including the motor vehicle

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<sup>1</sup> See letter, James N. Goldstene, Executive Officer, to Jared Blumenfeld, Regional Administrator, EPA Region 9, dated December 7, 2010, with attachments.

emissions budgets (MVEBs) in the 2008 Sacramento PM<sub>10</sub> Plan as a revision to the California SIP because we find the MVEBs meet the applicable transportation conformity requirements under 40 CFR 93.118(e). EPA finds that the maintenance demonstration shows how the area will continue to attain the 24-hour PM<sub>10</sub> NAAQS for at least 10 years beyond redesignation (i.e., through 2023) and that the contingency provisions describing the actions that the Sacramento Metropolitan Air Quality Management District (SMAQMD) will take in the event of a future monitored violation meet all applicable requirements for maintenance plans and related contingency provisions in CAA section 175A. Finally, EPA is proposing to approve the attainment year emissions inventory under CAA section 172(c)(3).

EPA is proposing these actions because the SIP revision meets the requirements of the CAA and EPA guidance for such plans and budgets.

## **II. Background**

### **A. *The PM<sub>10</sub> NAAQS***

EPA sets the NAAQS for certain ambient air pollutants at levels required to protect public health and welfare.

Particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers, or PM<sub>10</sub>, is one of these ambient air pollutants for which EPA has established health-based standards.

EPA revised the NAAQS for particulate matter on July 1, 1987 (52 FR 24633), replacing standards for total suspended particulates (TSP less than 30 microns in diameter) with new standards applying only to particulate matter up to 10 microns in diameter (PM<sub>10</sub>). At that time, EPA established two PM<sub>10</sub> standards, an annual standard and a 24-hour standard.

In an October 17, 2006 PM NAAQS revision, the 24-hour PM<sub>10</sub> standards were retained but the annual standards were revoked effective December 18, 2006. 71 FR 61144 (October 17, 2006). On January 15, 2013, EPA announced that it was again retaining the 24-hour PM<sub>10</sub> NAAQS as a 24-hour standard of 150 micrograms per cubic meter (ug/m<sup>3</sup>). See 78 FR 3086. This SIP submittal addresses the 24-hour PM<sub>10</sub> standard as originally promulgated in 1987 and reaffirmed on January 15, 2013. An area attains the 24-hour PM<sub>10</sub> standard of 150 micrograms per cubic meter (ug/m<sup>3</sup>) when the expected number of days per calendar year with a 24-hour concentration in excess of the standard (referred to as an exceedance), is equal to or less than one.<sup>2</sup>

#### *B. PM<sub>10</sub> Planning Requirements*

Effective January 20, 1994, EPA designated Sacramento County as a moderate nonattainment area for the PM<sub>10</sub> NAAQS. See

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<sup>2</sup> An exceedance is defined as a daily value that is above the level of the 24-hour standard, 150 ug/m<sup>3</sup>, after rounding to the nearest 10 ug/m<sup>3</sup> (i.e., values ending in five or greater are to be rounded up). Thus, a recorded value of 154 ug/m<sup>3</sup> would not be an exceedance since it would be rounded to 150 ug/m<sup>3</sup>; whereas, a recorded value of 155 ug/m<sup>3</sup> would be an exceedance since it would be rounded to 160 ug/m<sup>3</sup>. See 40 CFR part 50, Appendix K, section 1.0.

58 FR 67334 (December, 21, 1993). The designation, classification, and boundaries of the Sacramento nonattainment area are codified at 40 CFR 81.305.

Beginning in the 1970's and continuing to the present, the SMAQMD<sup>3</sup> and CARB have adopted a number of rules and prepared a number of nonattainment plans to address planning requirements under the CAA, as amended in 1977. CARB submitted these rules and plans to EPA at various times, and EPA approved a number of them into the California SIP. Examples of rules adopted by SMAQMD and approved by EPA as revisions to the California SIP as part of the PM<sub>10</sub> control strategy in the Sacramento PM<sub>10</sub> nonattainment area include: Rule 403 - Fugitive Dust; Rule 405 - Dust and Condensed Fumes; Rule 412 - Stationary Source Internal Combustion Engines at Major Stationary Sources of NO<sub>x</sub>; and Rule 414 - Natural Gas Fired Water Heaters. Examples of rules adopted by CARB and approved by EPA as revisions to the California SIP that have reduced PM<sub>10</sub> in the Sacramento PM<sub>10</sub> nonattainment area include: California Code of Regulations (CCR) Title 13, Section 1956.8 - Heavy Duty Vehicle Exhaust Emission Standards; CCR, Section 2262 - California Reformulated Gasoline Phase 2 and Phase 3 Standards; and CCR, Sections 2420-2427 - Heavy Duty Diesel Cycle Engines.

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<sup>3</sup> In 1990, the Sacramento County Air Pollution Control District changed its name to the Sacramento Metropolitan Air Quality Management District.

On February 15, 2002, EPA determined under section 179(c) of the CAA that the Sacramento PM<sub>10</sub> nonattainment area had attained the 24-hour PM<sub>10</sub> NAAQS by its December 31, 2000 attainment date, based on complete, quality-assured, and certified ambient air monitoring data that showed the area monitored attainment of the 24-hour PM<sub>10</sub> NAAQS for 1998-2000. (67 FR 7082). Because EPA determined that the Sacramento PM<sub>10</sub> nonattainment area met its attainment date, no PM<sub>10</sub> serious nonattainment area requirements apply in the Sacramento PM<sub>10</sub> nonattainment area. In this action, we are updating the determination of attainment to account for PM<sub>10</sub> monitoring data since 2001, including more recent years consistent with the applicable criterion for redesignation under CAA section 107(d)(3)(E)(i).

On December 7, 2010, CARB submitted the Sacramento PM<sub>10</sub> Maintenance Plan and requested that EPA redesignate the Sacramento PM<sub>10</sub> nonattainment area to attainment for the 24-hour PM<sub>10</sub> NAAQS. We are proposing action today on CARB's December 7, 2010 submittal, including the Sacramento PM<sub>10</sub> Maintenance Plan and redesignation request.

### **III. Procedural Requirements for Adoption and Submittal of SIP Revisions**

Sections 110(a)(1) and 110(l) of the Act require states to provide reasonable notice and public hearing prior to adoption

of SIP revisions. In this action, we are proposing action on CARB's December 7, 2010 submittal of the Sacramento PM<sub>10</sub> Maintenance Plan, dated October 28, 2010, as a revision to the California SIP. The submittal documents the public review process followed by SMAQMD and CARB in adopting the Sacramento PM<sub>10</sub> Maintenance Plan prior to submittal to EPA as a revision to the California SIP. The documentation provides evidence that reasonable notice of a public hearing was provided to the public and that a public hearing was conducted prior to adoption.

CARB's submittal includes a letter dated October 28, 2010 from Larry Greene, Executive Director / Air Pollution Control Officer to the Board of Directors for the SMAQMD. In addition, Enclosure 1, Attachment 3 of CARB's submittal includes a copy of the notice to the public published on September 27, 2010, announcing a public hearing to be held on October 28, 2010. These materials document the public review process followed by SMAQMD in adopting the Sacramento PM<sub>10</sub> Maintenance Plan prior to transmittal to CARB and provide evidence that reasonable notice of a public hearing was provided to the public and that a public hearing was conducted prior to adoption. Specifically, the notice for the Board hearing was published in the Sacramento Bee, a newspaper of general circulation, on September 27, 2010 and sent to over 2000 e-mail addresses. The Sacramento PM<sub>10</sub> Maintenance Plan was also made available for viewing on the

District's website and at the District office on and after September 27, 2010.

Enclosure I, Attachment 1 of CARB's submittal documents the adoption of the Sacramento PM<sub>10</sub> Plan by the SMAQMD Board of Directors. On October 28, 2010, the SMAQMD Board of Directors approved the Sacramento PM<sub>10</sub> Maintenance Plan and directed SMAQMD staff to forward the Plan to CARB, the Governor of California's designee for SIP matters.

Enclosure IV of CARB's submittal documents CARB's board resolution regarding the Sacramento PM<sub>10</sub> Plan. On December 7, 2010, CARB submitted the Sacramento PM<sub>10</sub> Maintenance Plan to EPA for approval as a revision to the California SIP.

Based on the documentation included in CARB's submittal, we find that the submittal of the Sacramento PM<sub>10</sub> Maintenance Plan as a SIP revision satisfies the procedural requirements of sections 110(1) of the Act for revising SIPs.

CAA section 110(k)(1)(B) requires EPA to determine whether a SIP submittal is complete within 60 days of receipt. This section also provides that any plan that we have not affirmatively determined to be complete or incomplete will become complete six months after the day of submittal by operation of law. A completeness review allows us to determine if the submittal includes all the necessary items and information we need to act on it.

We make completeness determinations using criteria we have established in 40 CFR part 51, Appendix V. These criteria fall into two categories: administrative information and technical support information. The administrative information provides documentation that the State has followed basic administrative procedures during the SIP-adoption process and thus we have a legally-adopted SIP revision in front of us. The technical support information provides us the information we need to determine the impact of the proposed revision on attainment and maintenance of the air quality standards.

We notify a state of our completeness determination by letter unless the submittal becomes complete by operation of law. A finding of completeness does not approve the submittal as part of the SIP nor does it indicate that the submittal is approvable. It does start a 12-month clock for EPA to act on the SIP submittal. See CAA section 110(k)(2). The Sacramento PM<sub>10</sub> Maintenance Plan became complete by operation of law on June 7, 2011.

#### **IV. Substantive Requirements for Redesignation**

The CAA establishes the requirements for redesignation of a nonattainment area to attainment. Specifically, section 107(d)(3)(E) allows for redesignation provided that the following criteria are met: (1) EPA determines that the area has attained the applicable NAAQS; (2) EPA has fully approved the

applicable implementation plan for the area under section 110(k); (3) EPA determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP, applicable federal air pollution control regulations, and other permanent and enforceable reductions; (4) EPA has fully approved a maintenance plan for the area as meeting the requirements of CAA section 175A; and (5) the State containing such area has met all requirements applicable to the area under section 110 and part D of the CAA.

EPA provided guidance on redesignations in a document entitled, "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," published in the Federal Register on April 16, 1992 (57 FR 13498), and supplemented on April 28, 1992 (57 FR 18070) (referred to herein as the "General Preamble"). Other relevant EPA guidance documents include: "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, EPA Office of Air Quality Planning and Standards, September 4, 1992 (referred to herein as the "Calcagni memorandum"); "Part D New Source Review (part D NSR) Requirements for Areas Requesting Redesignation to Attainment," Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, October 14, 1994

(Nichols memorandum); and "State Implementation Plans for Serious PM<sub>10</sub> Nonattainment Areas, and Attainment Date Waivers for PM<sub>10</sub> Nonattainment Areas Generally; Addendum to the General Preamble for the Implementation of title I of the Clean Air Act Amendments of 1990," 59 FR 41998 (August 16, 1994) (PM<sub>10</sub> Addendum).

In this proposed rulemaking action, EPA applies these policies to the Sacramento PM<sub>10</sub> Maintenance Plan, taking into consideration the specific factual issues presented. For the reasons set forth below in section V of this document, we propose to approve CARB's request for redesignation of the Sacramento PM<sub>10</sub> nonattainment area to attainment for the 24-hour PM<sub>10</sub> NAAQS based on our conclusion that all of the criteria under CAA section 107(d)(3)(E) have been satisfied.

## **V. Evaluation of the State's Redesignation Request for the Sacramento PM<sub>10</sub> Nonattainment Area**

### *A. Determination That the Area Has Attained the PM<sub>10</sub> NAAQS.*

CAA section 107(d)(3)(E)(i) states that for an area to be redesignated to attainment, EPA must determine that the area has attained the relevant NAAQS. In this case, the relevant NAAQS is the 24-hour PM<sub>10</sub> NAAQS.

Generally, EPA determines whether an area's air quality is meeting the 24-hour PM<sub>10</sub> NAAQS based upon complete,<sup>4</sup> quality-assured, and certified data gathered at established state and local air monitoring stations (SLAMS) in the nonattainment area and entered into the EPA Air Quality System (AQS) database. Data from air monitors operated by state, local, or tribal agencies in compliance with EPA monitoring requirements must be submitted to AQS. These monitoring agencies certify annually that these data are accurate to the best of their knowledge. Accordingly, EPA relies primarily on data in AQS when determining the attainment status of an area. See 40 CFR 50.6; 40 CFR part 50, appendices J and K; 40 CFR part 53; and, 40 CFR part 58, appendices A, C, D, and E.<sup>5</sup> EPA will also consider air quality data from other air monitoring stations in the nonattainment area provided those stations meet the federal monitoring requirements for SLAMS, including the quality assurance and quality control criteria in 40 CFR part 58, appendix A. See 40 CFR 58.14 (2006) and 58.20 (2007);<sup>6</sup> 71 FR 61236, 61242; (October 17, 2006). All valid data are reviewed to determine the area's

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<sup>4</sup> For PM<sub>10</sub>, a complete set of data includes a minimum of 75 percent of the scheduled PM<sub>10</sub> samples per quarter. See 40 CFR part 50, Appendix K, section 2.3(a).

<sup>5</sup> Because the annual PM<sub>10</sub> standard was revoked effective December 18, 2006, this document discusses only attainment of the 24-hour PM<sub>10</sub> standard. See 71 FR 61144; (October 17, 2006).

<sup>6</sup> EPA promulgated amendments to the ambient air monitoring regulations in 40 CFR parts 53 and 58 on October 17, 2006. (See 71 FR 61236.) The requirements for Special Purpose Monitors were revised and moved from 40 CFR 58.14 to 40 CFR 58.20.

air quality status in accordance with 40 CFR part 50, appendix K.

Attainment of the 24-hour  $PM_{10}$  standard is determined by calculating the expected number of exceedances of the standard in a year. The 24-hour  $PM_{10}$  standard is attained when the expected number of exceedances averaged over a three-year period is less than or equal to one at each monitoring site within the nonattainment area. Generally, three consecutive years of air quality data are required to show attainment of the 24-hour  $PM_{10}$  standard. See 40 CFR part 50 and appendix K.

To demonstrate attainment of the 24-hour  $PM_{10}$  standard at a monitoring site, the monitor must provide sufficient data to perform the required calculations in 40 CFR part 50, appendix K. The amount of data required varies with the sampling frequency, data capture rate, and the number of years of record. For  $PM_{10}$ , a "complete" set of data includes a minimum of 75 percent of the scheduled  $PM_{10}$  samples per quarter. See 40 CFR part 50, appendix K, section 2.3(a). In all cases, three years of representative monitoring data that meet the 75 percent criterion should be utilized, if available. More than three years may be considered if all additional representative years of data meeting the 75 percent criterion are utilized. Data not meeting these criteria may also suffice to show attainment; however, such exceptions must be approved by the appropriate Regional Administrator in

accordance with EPA guidance. See 40 CFR part 50, appendix K, section 2.3.

In the Sacramento PM<sub>10</sub> nonattainment area, the agencies responsible for assuring that the area meets air quality monitoring requirements include CARB and SMAQMD. Both CARB and SMAQMD submit annual monitoring network plans to EPA. SMAQMD network plans describe the monitoring network operated by SMAQMD and CARB in Sacramento County, and CARB's network plans describe the monitoring sites CARB operates. These plans discuss the status of the air monitoring network, as required under 40 CFR 58.10.

EPA regularly reviews these annual plans for compliance with the applicable reporting requirements in 40 CFR part 58. With respect to PM<sub>10</sub>, EPA has found that the area's network plans, submitted by CARB and SMAQMD, meet the applicable requirements under 40 CFR part 58. See EPA letters to CARB and SMAQMD approving their annual network plans for years 2010, 2011, and 2012.<sup>7,8</sup> EPA also concluded from its Technical System

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<sup>7</sup> Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Karen Magliano, Chief, Air Quality Data Branch, Planning and Technical Support Division, CARB (October 29, 2010) (approving CARB's "2010 Annual Monitoring Network Plan for the Small Districts in California"); Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Karen Magliano, Chief, Air Quality Data Branch, Planning and Technical Support Division, CARB (November 1, 2011) (approving CARB's "2011 Annual Monitoring Network Plan for the Small Districts in California"); Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Karen Magliano, Chief, Air Quality Data Branch, Planning and Technical Support Division, CARB (April 19, 2013) (approving CARB's "2012 Annual Monitoring Report for the Small Districts in California").

Audit of the CARB Primary Quality Assurance Organization (PQAO) (conducted during the summer of 2011), that the combined ambient air monitoring network operated by CARB and the local air districts in their PQAO (which includes SMAQMD) currently meets or exceeds the requirements for the minimum number of SLAMS for PM<sub>10</sub> in the Sacramento nonattainment area.<sup>9</sup> CARB annually certifies that the data it submits to AQS are complete and quality-assured.<sup>10</sup>

There are two types of PM<sub>10</sub> monitors used throughout the Sacramento PM<sub>10</sub> nonattainment area monitoring network: the Federal Reference Method (FRM) filter-based high-volume size-selective inlet sampler (hi-vols or SSI), and the Federal Equivalent Method (FEM) tapered element oscillating microbalance (TEOM), which measures PM<sub>10</sub> on a continuous basis. The schedule for PM<sub>10</sub> sample collection is one in six days for the FRM filter-

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<sup>8</sup> Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Larry Greene, Air Pollution Control Officer, SMAQMD (November 1, 2010) (approving the "Sacramento Metropolitan Air Quality Management District's 2010 Annual Monitoring Network Plan"); Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Larry Greene, Air Pollution Control Officer, SMAQMD (October 31, 2011) (approving the "Sacramento Metropolitan Air Quality Management District's 2011 Annual Monitoring Network Plan"); Letter from Matthew Lakin, Manager, Air Quality Analysis Office, U.S. EPA Region IX, to Larry Greene, Air Pollution Control Officer, SMAQMD (March 1, 2013) (approving the "Sacramento Metropolitan Air Quality Management District's 2012 Annual Monitoring Network Plan").

<sup>9</sup> See letter from Deborah Jordan, Director, Air Division, U.S. EPA Region IX, to James Goldstene, Executive Officer, CARB, transmitting "System Audit of the Ambient Monitoring Program: California Resources Board, June-September: 2011," with enclosure, October 22, 2012.

<sup>10</sup> See, e.g., letter from Sylvia Vanderspek, Chief, Air Quality Data Branch, Planning and Technical Support Division, CARB, to Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, certifying calendar year 2012 ambient air quality data and quality assurance data, May 16, 2013.

based high volume samplers, while the FEM TEOM monitors operate on a daily 24-hour schedule.

There were six PM<sub>10</sub> monitoring sites within the Sacramento PM<sub>10</sub> nonattainment area in calendar years 2010, 2011, and 2012. SMAQMD operates five of the monitoring sites: Goldenland Court, North Highlands, Del Paso Manor, Branch Center Rd #2, and Stockton Blvd. CARB operates the T Street monitoring site. FRM filter-based high-volume samplers are located at all of the six sites listed above. Del Paso Manor and the Stockton Blvd utilize both the FRM filter-based samplers and FEM TEOM monitors.<sup>11</sup> EPA defines specific monitoring site types and spatial scales of representativeness to characterize the nature and location of required monitors. For the six sites, the spatial scale is neighborhood scale, and the monitoring objective is population exposure, except the T Street site, which has a monitoring objective of highest concentration.<sup>12</sup>

Consistent with the requirements contained in 40 CFR part 50, EPA has reviewed the quality-assured, and certified PM<sub>10</sub> ambient air monitoring data as recorded in AQS for the applicable monitoring period collected at the monitoring sites in the Sacramento nonattainment area and determined that the data are complete.

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<sup>11</sup> A map of the locations of Sacramento County monitoring stations is found in Figure 3.2 of the Sacramento PM<sub>10</sub> Plan.

<sup>12</sup> See footnotes 7 and 8.

Table 1 summarizes the site-specific highest 24-hour PM<sub>10</sub> concentrations for the period of 2001-2012. As shown in Table 1, only one of the highest concentrations exceeded the 24-hour PM<sub>10</sub> NAAQS standard of 150 µg/m<sup>3</sup>. Table 2 summarizes the expected number of exceedances occurring over three-year periods dating back to EPA's previous clean data determination. See 67 FR 7082 (February 15, 2002). The 24-hour PM<sub>10</sub> standard is attained when the expected number of exceedances averaged over a three-year period is less than or equal to one at each monitoring site within the nonattainment area. The highest value in Table 2 is 0.3 exceedances over a three-year period, and the Sacramento PM<sub>10</sub> nonattainment area did not violate the 24-hour PM<sub>10</sub> NAAQS during the 2001-2012 period. Therefore, we are proposing to determine, based on the complete, quality-assured data for three most recent years (2010-2012) that the Sacramento PM<sub>10</sub> nonattainment area has attained the 24-hour PM<sub>10</sub> standard. There are six PM<sub>10</sub> monitors currently operating in the nonattainment area. Preliminary SLAMS data for 2013 from these monitors are also consistent with continued attainment.

**Table 1: Summary of Highest 24-hour PM<sub>10</sub> Concentrations (µg/m<sup>3</sup>) from Ambient Data Collected within the Sacramento PM<sub>10</sub> Nonattainment Area, 2001-2012.<sup>a</sup>**

| Site                                     | AQS Monitor ID | Highest Concentration (µg/m <sup>3</sup> ) |      |      |      |      |      |      |      |      |      |      |      |
|--|----------------|--|------|------|------|------|------|------|------|------|------|------|------|
|  |                | 2001                                       | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| North Highlands-Blackfoot                | 06-067-0002-1  | 64   | 53   | 62   | 44   | 110  | 65   | 56   | 97   | 33   | 48   | 65   | 34   |
| Sacramento-Del Paso Manor                | 06-067-0006-1  | 68   | 86   | 53   | 38   | 71   | 63   | 70   | 71   | 45   | 44   | 62   | 41   |
|  | 06-067-0006-3  | 65   | 43   | 43   | 101  | 49   | 132  | 66   | 92   | 39   | 19   | NA   | NA   |
| Branch Center Road #1 <sup>b</sup>       | 06-067-0283-1  | 78   | 77   | 75   | 45   | 61   | 38   | NA   | NA   | NA   | NA   | NA   | NA   |
| Branch Center Road #2 <sup>b</sup>       | 06-067-0284-1  | NA   | NA   | NA   | NA   | NA   | 81   | 56   | 89   | 76   | 62   | 69   | 60   |
| Sacramento-Airport Road <sup>c</sup>     | 06-067-0013-1  | 73   | 144  | NA   | 35   | 56   | 90   | 94   | 71   | NA   | NA   | NA   | NA   |
|  | 06-067-0013-2  | 51   | 73   | 57   | 47   | NA   |
| Sacramento Health Dept.-Stockton Blvd    | 06-067-4001-2  | 58   | 85   | 53   | 44   | 64   | 56   | 56   | 88   | 45   | 45   | 60   | 34   |
|  | 06-067-4001-3  | 122  | 103  | 73   | 91   | 70   | 159  | 51   | 92   | 44   | 50   | 73   | 37   |
| Sacramento-Goldenland Court <sup>c</sup> | 06-067-0014-1  | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 56   | 48   | 42   | 63   | 32   |
|  | 06-067-0014-3  | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | NA   | 55   | 69   | 76   |
| Sacramento-T Street                      | 06-067-0010-1  | 89   | 77   | 65   | 58   | 53   | 109  | 53   | 73   | 47   | 53   | 38   | 36   |
|  | 06-067-0010-2  | 73   | 86   | NA   |
|  | 06-067-0010-3  | 48   | NA   |

<sup>a</sup> The data in this table are from AQS QuickLook Reports dated January 10, 2013 and June 7, 2013.

<sup>b</sup> The Branch Center Road #1 monitor was replaced by the Branch Center Road #2 monitor, located .25 mi to the north, in early 2006.

<sup>c</sup> The Airport Road site was relocated to the Goldenland Court site in August 2008.

NA: data are not available.

**Table 2: Summary of Expected Exceedances 3-yr Average from Ambient Data Collected within the Sacramento PM<sub>10</sub> Nonattainment Area, 2001-2012.<sup>a</sup>**

| Site Name                                | Site (AQS Monitor ID) | Expected Exceedances 3-yr Average |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|--|-----------------------|-----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|  |                       | 1999<br>-<br>2001                 | 2000<br>-<br>2002 | 2001<br>-<br>2003 | 2002<br>-<br>2004 | 2003<br>-<br>2005 | 2004<br>-<br>2006 | 2005<br>-<br>2007 | 2006<br>-<br>2008 | 2007<br>-<br>2009 | 2008<br>-<br>2010 | 2009<br>-<br>2011 | 2010<br>-<br>2012 |
| North Highlands-Blackfoot                | 06-067-0002-1         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Sacramento-Del Paso Manor                | 06-067-0006-1         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
|  | 06-067-0006-3         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Branch Center Road #1 <sup>b</sup>       | 06-067-0283-1         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | NA                | NA                | NA                |
| Branch Center Road #2 <sup>b</sup>       | 06-067-0284-1         | NA                                | NA                | NA                | NA                | NA                | NA                | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
| Sacramento-Airport Road <sup>c</sup>     | 06-067-0013-1         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | NA                | NA                |
|  | 06-067-0013-2         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | NA                | NA                | NA                | NA                | NA                | NA                |
| Sacramento Health Dept.-Stockton Blvd    | 06-067-4001-2         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
|  | 06-067-4001-3         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0.3               | 0.3               | 0.3               | 0                 | 0                 | 0                 | 0                 |
| Sacramento-Goldenland Court <sup>c</sup> | 06-067-0014-1         | NA                                | NA                | NA                | NA                | NA                | NA                | NA                | 0                 | 0                 | 0                 | 0                 | 0                 |
|  | 06-067-0014-3         | NA                                | NA                | NA                | NA                | NA                | NA                | NA                | NA                | NA                | 0                 | 0                 | 0                 |
| Sacramento-T Street                      | 06-067-0010-1         | 0                                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 | 0                 |
|  | 06-067-0010-2         | 0                                 | 0                 | 0                 | 0                 | 0                 | NA                |
|  | 06-067-0010-3         | 0                                 | 0                 | 0                 | 0                 | 0                 | NA                |

<sup>a</sup> The data in this table are from AQS QuickLook Reports dated January 10, 2013 and June 7, 2013.

<sup>b</sup> The Branch Center Road #1 monitor was replaced by the Branch Center Road #2 monitor, located .25 mi to the north, in early 2006.

<sup>c</sup> The Airport Road site was relocated to the Goldenland Court site in August 2008.

NA: data are not available.

*B. The Area Must Have a Fully Approved SIP Meeting Requirements Applicable for Purposes of Redesignation under Clean Air Act Section 110 and Part D.*

Section 107(d)(3)(E)(ii) and (v) require EPA to determine that the area has a fully approved applicable SIP under section 110(k) that meets all applicable requirements under section 110 and part D for the purposes of redesignation.

1. Basic SIP Requirements under Section 110

The general SIP elements and requirements set forth in section 110(a)(2) include, but are not limited to, the following: submittal of a SIP that has been adopted by the State after reasonable public notice and hearing; provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality; implementation of a source permit program; provision for the implementation of part C requirements for prevention of significant deterioration (PSD) provisions; provisions for the implementation of part D requirements for nonattainment new source review (nonattainment NSR) NSR permit programs; provisions for air pollution modeling; and provisions for public and local agency participation in planning and emission control rule development.

We note that SIPs must be fully approved only with respect to applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii). The section 110 (and

part D) requirements that are linked to a particular nonattainment area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. Requirements that apply regardless of the designation of any particular area on the State are not applicable requirements for the purposes of redesignation, and the State will remain subject to these requirements after the Sacramento PM<sub>10</sub> nonattainment area is redesignated to attainment.

For example, CAA section 110(a)(2)(D) requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state, known as "transport SIPs." Because the section 110(a)(2)(D) requirements for transport SIPs are not linked to a particular nonattainment area's designation and classification but rather apply regardless of the attainment status, these are not applicable requirements for the purposes of redesignation under section 107(d)(3)(E).

Similarly, EPA believes that other section 110 (and part D) requirements that are not linked to nonattainment plan submissions or to an area's attainment status are not applicable requirements for purposes of redesignation. EPA believes that the section 110 (and part D) requirements that relate to a particular nonattainment area's designation and classification are the relevant measures to evaluate in reviewing a

redesignation request. This view is consistent with EPA's existing policy on applicability of the conformity SIP requirement for redesignations. See discussion in 75 FR 36023, 36026 (June 24, 2010).

On numerous occasions, CARB and SMAQMD have submitted and we have approved provisions addressing the basic CAA section 110 provisions. The Sacramento portion of the California SIP<sup>13</sup> contains enforceable emission limitations; requires monitoring, compiling and analyzing of ambient air quality data; requires preconstruction review of new or modified stationary sources; provides for adequate funding, staff, and associated resources necessary to implement its requirements; and provides the necessary assurances that the State maintains responsibility for ensuring that the CAA requirements are satisfied in the event that Sacramento is unable to meet its CAA obligations. There are no outstanding or disapproved applicable SIP submittals with respect to the Sacramento portion of the SIP that prevent redesignation of the Sacramento PM<sub>10</sub> nonattainment area for the 24-hour PM<sub>10</sub> standard. Therefore, we propose to conclude that CARB and SMAQMD have met all SIP requirements for Sacramento applicable for purposes of redesignation under section 110 of the CAA (General SIP Requirements).

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<sup>13</sup> Sacramento's portion of the California SIP may be found at <http://yosemite.epa.gov/r9/r9sips.nsf/Casips?readform&count=100&state=California>.

## 2. SIP Requirements Under Part D

Subparts 1 and 4 of part D, title 1 of the CAA contain air quality planning requirements for PM<sub>10</sub> nonattainment areas. Subpart 1 contains general requirements for all nonattainment areas of any pollutant, including PM<sub>10</sub>, governed by a NAAQS. The subpart 1 requirements include, among other things, provisions for the reasonable available control measures (RACM), reasonable further progress (RFP), emissions inventories, contingency measures, and conformity. Subpart 4 contains specific planning and scheduling requirements for PM<sub>10</sub> nonattainment areas. Section 189(a), (c), and (e) requirements apply specifically to moderate PM<sub>10</sub> nonattainment areas and include: (1) an approved permit program for construction of new and modified major stationary sources; (2) provisions for RACM; (3) an attainment demonstration; (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date; and (5) provisions to ensure that the control requirements applicable to major stationary sources of PM<sub>10</sub> also apply to major stationary sources of PM<sub>10</sub> precursors except where the Administrator has determined that such sources do not contribute significantly to PM<sub>10</sub> levels that exceed the NAAQS in the area.

As noted above, in 2002, EPA determined that the Sacramento PM<sub>10</sub> nonattainment area attained the 24-hour PM<sub>10</sub> NAAQS based on 1998-2000 data. (67 FR 7082, February 15, 2002). In accordance

with EPA's Clean Data Policy, we have determined that the following requirements do not apply to the State for so long as Sacramento continues to attain the PM<sub>10</sub> standard or until the area is redesignated to attainment: an attainment demonstration under section 189(a)(1)(B); RACM provisions under sections 172(c) and 189(a)(1)(C); reasonable further progress provisions under section 189(c)(1); and contingency measures under section 172(c)(9). For other rulemaking actions applying the Clean Data Policy in the context of PM<sub>10</sub>, see 77 FR 31271-72 (proposed Determination of Attainment for Paul Spur / Douglas, Arizona); 76 FR 10821-22 (proposed Determination of Attainment for Truckee Meadows, Nevada); 75 FR 13712-14 (proposed Determination of Attainment for Coso Junction, California); 75 FR 36027 (proposed Redesignation for Coso Junction, California); 73 FR 22313 (proposed Redesignation for San Joaquin Valley). *See also*, 40 CFR 51.918.

Moreover, in the context of evaluating the area's eligibility for redesignation, there is a separate and additional justification for finding that requirements associated with attainment are not applicable for purposes of redesignation. Prior to and independently of the Clean Data Policy, and specifically in the context of redesignations, EPA interpreted attainment-linked requirements as not applicable for purposes of redesignation. In the General Preamble, "General

Preamble for the Interpretation of Title I of the Clean Air Act Amendments of 1990," (General Preamble) 57 FR 13498, 13564 (April 16, 1992), EPA stated: [t]he section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date. These requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, section 175A for maintenance plans \* \* \* provides specific requirements for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas. See also Calcagni memorandum at 6 ("The requirements for reasonable further progress and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard."). Thus, even if the requirements associated with attainment had not previously been suspended, they would not apply for purposes of evaluating whether an area that has attained the standard qualifies for redesignation. EPA has enunciated this position since the General Preamble was published more than twenty years ago, and it represents the Agency's interpretation of what constitutes applicable requirements under section 107(d)(3)(E). The Courts have recognized the scope of EPA's authority to interpret "applicable requirements" in the redesignation context. See *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir.2004).

The remaining applicable Part D requirements for moderate PM<sub>10</sub> areas are: (1) an emission inventory under section 172(c) (3); (2) a permit program for the construction and operation of new and modified major stationary sources of PM<sub>10</sub> under sections 172(c) (5) and 189(a) (1) (A); (3) control requirements for major stationary sources of PM<sub>10</sub> precursors under section 189(e), except where the Administrator determines that such sources do not contribute significantly to PM<sub>10</sub> levels that exceed the standard in the area; (4) requirements under section 172(c) (7) that meet the applicable provisions of section 110(a) (2); and (5) provisions to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP under section 176(c). We discuss each of these requirements below.

- *Emissions Inventory*

CAA section 172(c) (3) requires states to submit a comprehensive, accurate, current inventory of relevant PM<sub>10</sub> pollutants for the baseline year from all sources within the nonattainment area. The inventory is to address direct and secondary PM<sub>10</sub> emissions, and all stationary (generally referring to larger stationary source or "point" sources), area (generally referring to smaller stationary and fugitive sources), and mobile (on-road, nonroad, locomotive and aircraft) sources are to be included in the inventory. We interpret the Act such that

the emission inventory requirements of section 172(c)(3) are satisfied by the inventory requirements of the maintenance plan. See 57 FR 13498, at 13564 (April 16, 1992). Thus, EPA is proposing to approve the attainment inventories submitted as part of the Sacramento PM<sub>10</sub> Maintenance Plan as satisfying the requirements of sections 172(c)(3) for the purposes of redesignation of the Sacramento PM<sub>10</sub> nonattainment area to attainment for the 24-hour PM<sub>10</sub> NAAQS. The attainment inventories are described in V.D.1 of this notice.

- *Permits for New and Modified Major Stationary Sources*

CAA Sections 172(c)(5) and 189(a)(1)(A) require the State to submit SIP revisions that establish certain requirements for new or modified stationary sources in nonattainment areas, including provisions to ensure that major new sources or major modifications of existing sources of nonattainment pollutants incorporate the highest level of control, referred to as the Lowest Achievable Emission Rate (LAER), and that increases in emissions from such stationary sources are offset so as to provide for reasonable further progress towards attainment in the nonattainment area. The process for reviewing permit applications and issuing permits for new or modified stationary sources in nonattainment areas is referred to as "nonattainment New Source Review" (nonattainment NSR).

EPA has previously approved SMAQMD Rule 203 (Prevention of Significant Deterioration) and partially approved and partially disapproved SMAQMD Rule 214 (Federal New Source Review). 76 FR 43183 (July 20, 2011). Because of the partial disapproval, SMAQMD does not currently have a fully-approved nonattainment NSR program.

The NSR deficiencies identified in EPA's partial approval and partial disapproval of Rule 214 are limited to the following issues: (1) a small number of definitions: "begin actual construction," "federally enforceable," and "necessary preconstruction approvals or permits"; (2) the rule is missing adequate public notice requirements for minor sources; (3) the rule is missing provisions meeting the requirements of 40 CFR 51.165(a)(5)(ii) and 40 CFR 51.307(b)(2); and (4) the rule contains a cross reference to Rule 207 – Title V – Federal Operating Permit Program, which is not SIP approved. The limited disapproval triggered an obligation on EPA to promulgate a federal implementation plan (FIP) to remedy the NSR deficiencies by August 19, 2013. See 76 FR 43184 (July 20, 2011). To correct the deficiencies, on September 26, 2012, CARB submitted amended SMAQMD Rule 214 for inclusion in the SIP. On February 14, 2013, a notice of proposed rulemaking to approve revised Rule 214 was published in the Federal Register. See 78 FR 10589. On April 25, 2013, Regional Administrator Jared Blumenfeld signed a notice of

final rulemaking to approve revised Rule 214. It is currently awaiting publication in the Federal Register. If the final rulemaking for revised Rule 214 becomes effective prior to EPA finalizing the area's redesignation to attainment for PM<sub>10</sub>, the 172(c)(5) and 189(a)(1)(A) requirements would be fulfilled prior to redesignation.

If EPA does not approve revised Rule 214 prior to EPA finalizing the area's redesignation to attainment for PM<sub>10</sub>, it would not affect EPA approval of the redesignation request because upon redesignation the requirements of SMAQMD's PSD program would apply to PM<sub>10</sub> and PM<sub>10</sub> precursor emissions of new major sources or major modifications. Thus, new major sources with significant PM<sub>10</sub> emissions and major modifications of PM<sub>10</sub> at major sources as defined under 40 CFR 51.21 will be required to obtain a PSD permit or include PM<sub>10</sub> emissions in their existing PSD permit. Since PSD requirements<sup>14</sup> will apply after redesignation, an area being redesignated to attainment need not comply with the requirement that a nonattainment NSR program be approved prior to redesignation as long as the state demonstrates maintenance of the NAAQS in the area without implementation of nonattainment NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols,

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<sup>14</sup> PSD requirements control the growth of new source emissions in areas designated as attainment for a NAAQS.

Assistant Administrator for Air and Radiation, dated October 14, 1994, titled "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment." See also, redesignation rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and, Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

Based on our review of the Sacramento PM<sub>10</sub> Maintenance Plan, we conclude that the maintenance demonstration does not rely on implementation of nonattainment NSR because the Plan applies standard growth factors to stationary source emissions and does not rely on NSR offsets to reduce the rate of increase in emissions over time from point sources.<sup>15</sup> In addition, the PM<sub>10</sub> Maintenance Plan adds emission reduction credits (ERCs) for PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>x</sub> to future projected emissions to ensure that the use of ERCs will not be inconsistent with the future PM<sub>10</sub> maintenance goals. Therefore, EPA concludes that a fully-approved nonattainment NSR program is not necessary for approval of the State's redesignation request for the Sacramento PM<sub>10</sub> nonattainment area.

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<sup>15</sup> See letter, Larry Greene, Executive Officer, SMAQMD, to Deborah Jordan, Director, Air Division, US EPA, Region 9, dated June 28, 2013.

We conclude that Sacramento's portion of the California SIP adequately meets the requirements of section 172(c)(5) and 189(a)(1)(A) for purposes of this redesignation.

- *Control Requirements for PM<sub>10</sub> Precursors*

Section 189(e) of the CAA requires that the control requirements applicable under the part D SIP for major stationary sources of PM<sub>10</sub> also apply to major stationary sources of PM<sub>10</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. Sacramento's PM<sub>10</sub> Maintenance Plan states that NO<sub>x</sub> is a PM<sub>10</sub> precursor in the secondary formation of atmospheric ammonium nitrates, which are a significant component of PM<sub>10</sub> concentrations in the Sacramento area. SMAQMD also determined, based on analyses of inventories<sup>16</sup> from CARB and Chemical Mass Balance modeling, that emissions of sulfur oxides<sup>17</sup> (SO<sub>x</sub>) and volatile organic compounds (VOCs) from sources in the Sacramento nonattainment area are an insignificant contributor to secondary particulate formation in the Sacramento PM<sub>10</sub> nonattainment area. Therefore, SO<sub>x</sub> and VOC emissions are not included in the Sacramento PM<sub>10</sub> Maintenance

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<sup>16</sup> California Emission Forecasting System (CEFS) Version 1.06 Sacramento Metropolitan AQMD, Rf#980.

<sup>17</sup> The following SMAQMD measures were previously implemented to reduce sulfur dioxide emissions: Rule 406 - Specific Contaminants and Rule 420 - Sulfur Content of Fuels. These measures were approved into the SIP on December 5, 1984 (49 FR 47490). Adjusting for the past decrease in SOX emissions, current ambient ammonium sulfate concentrations are estimated to be about 1 µg/m<sup>3</sup>.

Plan. See pages 4-1 and 5-4 in the Sacramento PM<sub>10</sub> Maintenance Plan. To satisfy ozone nonattainment requirements in CAA section 182(b), SMAQMD has adopted Reasonably Available Control Technology rules to reduce NO<sub>x</sub> emissions from existing sources. See Rules 411, 412, and 413 in Table 3 in this action. These rules also address the control requirements in CAA section 189(e) because they control NO<sub>x</sub> emissions from major stationary sources. Major stationary sources of NO<sub>x</sub> are also controlled by Rules 202 and 203, which are the District's nonattainment NSR and PSD permitting programs.

- *Compliance with Section 110(a)(2)*

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, we conclude the California SIP meets the requirements of section 110(a)(2) applicable for purposes of this redesignation.

- *General and Transportation Conformity Requirements*

Under section 176(c) of the Clean Air Act Amendments of 1990, states are required to establish criteria and procedures to ensure that federally supported or funded projects conform to the air quality planning goals in the applicable SIP. Section 176(c) further provides that state conformity provisions must be consistent with federal conformity regulations that the CAA requires EPA to promulgate. EPA's conformity regulations are codified at 40 CFR part 93, subparts A (referred to herein as

"transportation conformity") and B (referred to herein as "general conformity"). Transportation conformity applies to transportation plans, programs, and projects developed, funded, and approved under title 23 U.S.C. or the Federal Transit Act, and general conformity applies to all other federally-supported or funded projects. SIP revisions intended to address the conformity requirements are referred to herein as "conformity SIPs."

EPA believes it is reasonable to interpret the conformity SIP requirements as not applying for purposes of a redesignation request under section 107(d) because state conformity rules are still required after redesignation and federal conformity rules apply where state rules have not been approved. See *Wall v. EPA*, 265 F. 3d 426 (6th Cir. 2001), upholding this interpretation. See also, 60 FR 62748 (December 7, 1995).

Thus, EPA proposes to determine that, if EPA later finalizes its approval of the Sacramento PM<sub>10</sub> Maintenance Plan described in today's proposal and also finalizes its approval of the emissions inventory and motor vehicle emissions budgets for SMAQMD, the State has a fully-approved SIP meeting all requirements applicable under section 110 and part D for the Sacramento PM<sub>10</sub> nonattainment area for purposes of redesignation. CAA Section 107(d)(3)(E)(v).

*C. EPA Has Determined That the Improvement in Air Quality Is Due to Permanent and Enforceable Reductions in Emissions.*

Section 107(d)(3)(E)(iii) requires EPA to determine that the improvement in air quality is due to emission reductions that are permanent and enforceable resulting from the implementation of the applicable SIP and applicable Federal air pollution control regulations and other permanent and enforceable regulations in order to approve a redesignation to attainment. Under this criterion, the State must be able to reasonably attribute the improvement in air quality to emissions reductions which are permanent and enforceable. Attainment resulting from temporary reductions in emissions rates (e.g., reduced production or shutdown due to temporary adverse economic conditions) or unusually favorable meteorology would not qualify as an air quality improvement due to permanent and enforceable emission reductions. Calcagni memorandum, p. 4.

Historically, exceedances of the 24-hour PM<sub>10</sub> NAAQS in the Sacramento nonattainment area occur in late November and December. The Chemical Mass Balance (CMB) model was used to identify source contributions for ambient air quality samples collected during the winter months (i.e., November through January) for 1991-1996. CMB uses known chemical "fingerprints" of various source types together with measurements of the chemical components of ambient PM<sub>10</sub> to find the contribution of

those sources to PM<sub>10</sub> concentrations. CMB results show the main components of wintertime PM<sub>10</sub> in the Sacramento nonattainment area were secondary ammonium nitrate particles (29%), motor vehicle exhaust from cars, trucks, and buses (23%), wood smoke (17%), and fugitive dust (12%).<sup>18</sup> The CMB analysis indicates how reductions in emissions of primary PM<sub>10</sub> and PM<sub>10</sub> precursors (e.g., NOx) will reduce ambient PM<sub>10</sub> concentrations; each of the ambient components can be "rolled back" in proportion to the emission changes in the corresponding source categories. The Sacramento PM<sub>10</sub> Maintenance Plan credits control measures adopted and implemented by SMAQMD and CARB and approved into the SIP by EPA as reducing emissions to attain the 24-hour PM<sub>10</sub> NAAQS.

The SMAQMD has jurisdiction over air quality planning requirements for Sacramento County. The SMAQMD has adopted numerous plans, rules, and revisions for Sacramento County in order to reduce PM<sub>10</sub> and PM<sub>10</sub> precursor emissions. The Sacramento PM<sub>10</sub> Maintenance Plan includes a list of control measures adopted and implemented by SMAQMD and approved into the SIP by EPA as reducing emissions to attain the 24-hour PM<sub>10</sub> NAAQS. Table 3 lists SMAQMD rules contributing towards attainment and/or continued attainment of the 24-hour PM<sub>10</sub> NAAQS.

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<sup>18</sup> See Sacramento PM<sub>10</sub> Maintenance Plan, section 3.5, page 3-10.

**Table 3. Sacramento Metropolitan AQMD Control Measures and Programs Contributing Towards Attainment and/or Continued Attainment of the 24-hour PM<sub>10</sub> NAAQS.**

| <b>Rule</b>   | <b>Title</b>   | <b>Date Approved into SIP</b> | <b>Citation</b>            |
|---|--|-------------------------------|----------------------------|
| 401   | Ringelmann Chart/Opacity   | 02/01/1984                    | 49 FR 3987                 |
| 403   | Fugitive Dust  | 12/05/1984                    | 49 FR 47490                |
| 404   | Particulate Matter   | 07/13/1987                    | 52 FR 26148                |
| 405   | Dust and Condensed Fumes   | 12/05/1984                    | 49 FR 47490                |
| 406   | Specific Contaminants  | 12/05/1984                    | 49 FR 47490                |
| 407   | Open Burn  | 12/05/1984                    | 49 FR 47490                |
| 417   | Wood Burning Appliances  | 04/11/2013                    | 78 FR 21540                |
| 408   | Incinerator Burning  | 12/05/1984                    | 49 FR 47490                |
| 409   | Orchard Heaters  | 12/05/1984                    | 49 FR 47490                |
| 411   | NO <sub>x</sub> from Boilers, Process Heaters, and Steam Generators                          | 08/01/2007                    | 72 FR 41894                |
| 412   | Stationary Source Internal Combustion Engines at Major Stationary Sources of NO <sub>x</sub> | 04/30/1996                    | 61 FR 18959                |
| 413   | Stationary Gas Turbines  | 02/11/1999                    | 64 FR 6803                 |
| 414   | Natural Gas Fired Water Heaters  | 04/20/1999,<br>11/01/2011     | 64 FR 19277<br>76 FR 67366 |
| 420   | Sulfur Content of Fuels  | 12/05/1984                    | 49 FR 47490                |
| 501   | Agricultural Burning   | 12/05/1984                    | 49 FR 47490                |
| <b>Other SMAQMD measures or programs not in the SIP<sup>19,20</sup></b> |  |                               |                            |

<sup>19</sup> On September 26, 2012, Rule 421 was submitted to EPA for inclusion in the SIP. The Wood Stove/Fireplace Change Out Incentive Program, Spare The Air public education program, and Sacramento Valley Air Basin Smoke Management Program have not been submitted for inclusion in the SIP.

<sup>20</sup> Sacramento County also participates in the State's Sacramento Valley Air Basin Smoke Management Program. The program describes the policies and procedures used with hourly and daily measurements of air quality and meteorology to determine how much open biomass burning can be allowed in the Sacramento Valley Air Basin. The program ensures that agricultural burning is prohibited on days meteorologically conducive to potentially elevated PM<sub>10</sub> concentrations. The area covered by the program is referred to as the Sacramento Valley Air Basin, and includes all or parts of the following counties: Butte, Colusa, Glenn, Placer (portion), Sacramento, Shasta, Solano

|     |   |
|-----|---|
| 421 | Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning |
| --  | Wood Stove/Fireplace Change Out Incentive Program                   |
| --  | Spare The Air   |

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. In addition, California has unique authority under CAA section 209 (subject to a waiver by EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines. California has been a leader in the development of some of the most stringent control measures nationwide for on-road and off-road mobile sources and the fuels that power them. These measures have helped reduce primary PM<sub>10</sub> and PM<sub>10</sub> precursors in the Sacramento PM<sub>10</sub> nonattainment area and throughout the State.

CARB's 2007 State Strategy and 2009 and 2011 updates to the State Strategy provide a recent summary of the measures adopted and implemented by the State.<sup>21</sup> From 1994 to 2006, the State promulgated more than thirty-five rules that have achieved

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(portion), Sutter, Tehama, Yolo and Yuba. See Title 17 California Code of Regulations, Subchapter 2, Section 80100 et. seq. The regulations can be viewed at <http://www.arb.ca.gov/smp/regs/RevFinRegwTOC.pdf>.

<sup>21</sup> See "Air Resources Board's Proposed State Strategy for California's 2007 State Implementation Plan," release date: April 26, 2007 (2007 State Strategy).

significant emission reductions contributing to attainment and continued attainment in the Sacramento PM<sub>10</sub> nonattainment area. See 2007 State Strategy, p.38.<sup>22,23</sup> These measures include new emission standards and in-use requirements that have resulted in significant reductions in emissions of PM<sub>10</sub> and PM<sub>10</sub> precursors (e.g., NO<sub>x</sub>) from categories such as passenger cars, trucks, buses, motorcycles, locomotives, cargo handling equipment, and large off-road equipment. EPA has generally approved into the SIP all of the State's measures that are not subject to the CAA section 209 waiver process. See EPA's final approval of the San Joaquin Valley PM<sub>2.5</sub> Plan at 76 FR 69896 (November 9, 2011) and accompanying *Technical Support Document and Responses to Comments*.<sup>24</sup> Finally, in addition to the local district and State rules discussed above, the Sacramento PM<sub>10</sub> nonattainment area has also benefitted from emission reductions from federal measures.

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<sup>22</sup> The 2007 Proposed State Strategy can be found at: <http://arb.ca.gov/planning/sip/2007sip/apr07draft/sipback.pdf>. Page 38 of the Proposed State Strategy lists forty-five actions; thirty-five of these actions provide NO<sub>x</sub> reductions.

<sup>23</sup> On August 12, 2009, CARB submitted the "Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revision to the SIP Reflecting Implementation of the 2007 State Strategy," dated March 24, 2009 and adopted April 24, 2009 ("2009 State Strategy Status Report"). This submittal updated the 2007 State Strategy to reflect its implementation during 2007 and 2008. See CARB Resolution No. 09-34, April 24, 2009 and letter, James N. Goldstene, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region 9, August 12, 2009 with enclosures. Only pages 11-27 of the 2009 State Strategy Status Report are submitted as a SIP revision. The balance of the report is for informational purposes only. See Attachment A to CARB Resolution No. 09-34.

<sup>24</sup> Technical Support Document and Responses to Comments, Final Rule on the San Joaquin Valley 2008 PM<sub>2.5</sub> State Implementation Plan, September 30, 2011. This document can be found at: <http://www.regulations.gov/#!documentDetail;D=EPA-R09-OAR-2010-0516-0175>.

These federal measures include EPA's national emissions standards for heavy-duty diesel trucks (66 FR 5001 (January 18, 2001)), certain emissions standards for new construction and farm equipment (Tier 2 and 3 non-road engines standards, 63 FR 56968 (October 23, 1998) and Tier 4 diesel non-road engine standards, 69 FR 38958 (June 29, 2004)), and locomotive engine standards (63 FR 18978 (April 16, 1998) and 73 FR 37096 (June 30, 2008)).

The on-road and off-road vehicle and engine standards cited above have contributed to improved air quality through the gradual, continued turnover and replacement of older vehicle models with newer models manufactured to meet increasingly stringent emissions standards.

We note that many of the control measures cited above and in the Sacramento PM<sub>10</sub> Maintenance Plan have provided emissions reductions since 1990, and thus, the improvement in air quality since 1990 may reasonably be attributed to them.

A sense of the effectiveness of the control measures to reduce PM<sub>10</sub> and PM<sub>10</sub> precursor emissions can be gained by comparing emissions in 1990 (a nonattainment year), 2000 (the year EPA determined the area met its attainment date) and 2008 (an attainment year).<sup>25</sup> In 1990, area-wide PM<sub>10</sub> and NO<sub>x</sub> emissions in the Sacramento PM<sub>10</sub> nonattainment area were estimated to be

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<sup>25</sup> See Appendix A in the Sacramento PM<sub>10</sub> Maintenance Plan.

approximately 37 and 133 tons per day (winter day), respectively. In 2000, despite an increase in population and vehicle-miles-traveled (VMT) of approximately 14% and 15%, respectively, area-wide emissions of PM<sub>10</sub> dropped to 33 tons per day and NO<sub>x</sub> declined to 100 tons per day compared. Despite increases between 1990 and 2008 in population (29%) and VMT (35%), area-wide emissions of direct PM<sub>10</sub> decreased slightly to 35 tons per day. NO<sub>x</sub> emissions decreased significantly to 82 tons per day, a reduction of approximately 38% compared to 1990 levels.

With respect to the connection between the emissions reductions and the improvement in air quality, we also conclude that the air quality improvement in the Sacramento PM<sub>10</sub> nonattainment area since 1990 through 2011 is not the result of a local economic downturn or unusual or extreme weather patterns. Our conclusion is based on the air quality data in Table 1 and recognition that the fluctuation in economic and meteorological conditions since 1998 did not result in a violation of the 24-hour PM<sub>10</sub> standard.<sup>26</sup> We do recognize that a significant economic slowdown occurred nationally starting in 2008, but we note that the downward PM<sub>10</sub> trend had already been

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<sup>26</sup> EPA's February 2002 determination that the Sacramento PM<sub>10</sub> nonattainment area had attained the 24-hour PM<sub>10</sub> NAAQS was based on complete, quality-assured, and certified ambient air monitoring data for 1998-2000.

established before that time (see Figure 3.3 on page 3-7 of the Sacramento PM<sub>10</sub> Maintenance Plan).

Thus, we find that the improvement in air quality in the Sacramento PM<sub>10</sub> nonattainment area is the result of permanent and enforceable emissions reductions from a combination of EPA-approved local and State control measures and federal control measures. As such, we propose to find that the criterion for redesignation set forth at CAA section 107(d)(3)(E)(iii) is satisfied.

*D. The Area Must Have a Fully Approved Maintenance Plan under Clean Air Act Section 175A.*

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. We interpret this section of the Act to require, in general, the following core elements: attainment inventory, maintenance demonstration plus a commitment to submit a second maintenance plan eight years after redesignation, monitoring network, verification of continued attainment, and contingency plan. See Calcagni memorandum, pages 8 through 13.

Under CAA section 175A, a maintenance plan must demonstrate continued attainment of the applicable NAAQS for at least ten years after EPA approves a redesignation to attainment. Eight years after redesignation, the State must submit a revised

maintenance plan that demonstrates continued attainment for the subsequent ten-year period following the initial ten-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency provisions that EPA deems necessary to promptly correct any violation of the NAAQS that occurs after redesignation of the area. Based on our review and evaluation of the plan, as detailed below, we are proposing to approve the Sacramento PM<sub>10</sub> Maintenance Plan because we believe that it meets the requirements of CAA section 175A.

#### 1. Attainment Inventory

Section 172(c)(3) of the CAA requires plan submittals to include a comprehensive, accurate, and current inventory of actual emissions from all sources in the nonattainment area. In demonstrating maintenance in accordance with CAA section 175A and the Calcagni memorandum, the State should provide an attainment emissions inventory to identify the level of emissions in the area sufficient to attain the NAAQS. Where the State has made an adequate demonstration that air quality has improved as a result of the SIP, the attainment inventory will generally be an inventory of actual emissions at the time the area attained the standard. EPA's primary guidance in evaluating these inventories is the document entitled, "PM-10 Emissions Inventory Requirements," EPA, OAQPS, EPA-454/R-94-033 (September

1994) which can be found at:

<http://www.epa.gov/ttn/chief/eidocs/pm10eir.pdf>.

A maintenance plan for the 24-hour PM<sub>10</sub> standard must include an inventory of emissions of PM<sub>10</sub> and its precursors (NO<sub>x</sub>, sulfur oxides, and volatile organic compounds) in the area to identify a level of emissions sufficient to attain the 24-hour PM<sub>10</sub> NAAQS. This inventory must be consistent with EPA's most recent guidance on emissions inventories for nonattainment areas available at the time and should represent emissions during the time period associated with the monitoring data showing attainment. The inventory must also be comprehensive, including emissions from stationary point sources, area sources, and mobile sources.

SMAQMD selected year 2008 as the year for the attainment inventory in the Sacramento PM<sub>10</sub> Maintenance Plan. Year 2008 is a current, accurate, and comprehensive inventory during a period which the area continued to attain the 24-hour PM<sub>10</sub> standard prior to adoption and submittal of the redesignation request and maintenance plan. The attainment inventory will generally be the actual inventory during the time period the area attained the standard. EPA previously made an attainment determination for the Sacramento PM<sub>10</sub> nonattainment area. See 67 FR 7082, February 15, 2002. Thus, Sacramento Metropolitan's selection of 2008 for the attainment inventory is acceptable.

Based on our review of the Sacramento PM<sub>10</sub> Maintenance Plan, we find that the emissions inventories in the Plan are comprehensive in that they include estimates of PM<sub>10</sub> and its precursors from all of the relevant source categories, which the Plan divides among stationary, area wide, on-road motor vehicles, and other mobile.

The Sacramento PM<sub>10</sub> Maintenance Plan includes inventories for total primary PM<sub>10</sub> and for NO<sub>x</sub> as a PM<sub>10</sub> precursor. See tables 4-1 and 4-2 in the Sacramento PM<sub>10</sub> Maintenance Plan. Appendix A to the PM<sub>10</sub> Maintenance Plan contains additional details of the emission inventories for 2008 (and 1990, 1995, 2000, 2012, and 2022). As previously described in section V.B.2, SMAQMD determined, based on analyses of inventories from CARB and Chemical Mass Balance modeling, that emissions of SO<sub>x</sub> and VOCs from sources in the Sacramento nonattainment area are an insignificant contributor to secondary particulate formation in the Sacramento PM<sub>10</sub> nonattainment area. Therefore, SO<sub>x</sub> and VOC emissions are not included in the Sacramento PM<sub>10</sub> Maintenance Plan.

The stationary source category includes non-mobile, fixed sources of air pollution. Examples of sources included in this category include fuel combustion (e.g., electric utilities), waste disposal (e.g., landfills), and oil and gas production. SMAQMD's 2008 (and subsequent year inventories) for stationary

sources were developed using methods in CARB's 2009 Almanac<sup>27</sup> and information reported by emission sources to SMAQMD and entered into the California Emission Inventory Development and Reporting System (CEIDARS) database.<sup>28</sup> For area wide sources, SMAQMD calculated emissions based on reported data for fuel usage, product sales, population, employment data, and other parameters covering a wide range of activities.<sup>29</sup>

The on-road mobile source category consists of trucks, automobiles, buses, and motorcycles. The on-road emissions inventory estimates in the Sacramento PM<sub>10</sub> Plan were prepared by CARB using EMFAC2007 (version 2.3), a California model for on-road motor vehicle emissions.<sup>30</sup> The vehicle miles traveled were developed from Sacramento Area Council of Governments-supplied activity data using transportation modeling prepared for the Sacramento region's August 2009 Metropolitan Transportation Improvement Program.<sup>31</sup>

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<sup>27</sup> The 2009 Almanac contains information about current and historical air quality and emissions in California. In addition, forecasted emissions are presented. See <http://www.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm>

<sup>28</sup> The CEIDARS database consists of two categories of information: [source information](#) and [utility information](#). Source information includes the basic inventory information generated and collected on all point and area sources. Utility information generally includes auxiliary data, which helps categorize and further define the source information. Used together, CEIDARS is capable of generating complex reports based on a multitude of category and source selection criteria.

<sup>29</sup> For more information on emissions from the area-wide source category, see the CARB web site: <http://www.arb.ca.gov/ei/areasrc/areameth.htm>.

<sup>30</sup> EMFAC software and detailed information on the vehicle emission model can be found on the CARB web site at <http://www.arb.ca.gov/msei/onroad/onroad.htm>.

<sup>31</sup> Metropolitan Transportation Improvement Program 2009/12, Sacramento Area Council of Governments, August 21, 2008.

With respect to nonroad mobile sources (or other mobile as categorized in the PM<sub>10</sub> Plan), the category includes aircraft, trains, boats, and off-road vehicles and equipment used for construction, farming, commercial, industrial, and recreational activities. CARB used its OFFROAD2007 to calculate the nonroad emissions.<sup>32</sup> In general, emissions are calculated using equipment population, engine size and load, usage activity, and emission factors.

Table 4 presents the direct PM<sub>10</sub> and PM<sub>10</sub> precursor emissions (i.e., NO<sub>x</sub>) estimates contained in the Sacramento PM<sub>10</sub> Maintenance Plan for 2008. Based on the estimates in table 4, the area-wide category of emissions accounted for 86% of the direct PM<sub>10</sub>, with residential fuel combustion making up 28%, construction and demolition 20%, and paved road dust 17% of the total direct PM<sub>10</sub> inventory for 2008. Mobile source emissions accounted for 90% of the NO<sub>x</sub> emissions generated within the PM<sub>10</sub> nonattainment area in 2008 with on-road motor vehicle emissions comprising approximately 61% and off-road equipment 20% of the total NO<sub>x</sub> inventory for 2008.

**Table 4: 2008 Actual PM<sub>10</sub> Emissions from various source categories in the Sacramento PM<sub>10</sub> Nonattainment Area, Total Daily Emissions (tons per day, average winter day)<sup>a</sup>**

| Category | Emission Source | 2008             |                 |
|----------|-----------------|------------------|-----------------|
|          |                 | PM <sub>10</sub> | NO <sub>x</sub> |
|          |                 |                  |                 |

<sup>32</sup> See <http://www.arb.ca.gov/msei/offroad/offroad.htm>

|                        |                              |           |           |
|------------------------|------------------------------|-----------|-----------|
| Stationary             | Fuel Combustion              | 0.5       | 3.9       |
|                        | Industrial Processes         | 1.0       | 0.1       |
| Area wide              | Residential Fuel Combustion  | 9.9       | 4.4       |
|                        | Farming Operations           | 2.4       | -         |
|                        | Construction and Demolition  | 7.0       | -         |
|                        | Paved Road Dust              | 6.1       | -         |
|                        | Unpaved Road Dust            | 3.6       | -         |
|                        | Managed Burning and Disposal | -         | 0.1       |
|                        | Other                        | 1.2       | -         |
| On-Road Motor Vehicles | On-Road Motor Vehicles       | 2.2       | 49.6      |
| Other Mobile           | Aircraft                     | 0.1       | 2.0       |
|                        | Trains                       | 0.1       | 3.4       |
|                        | Boats                        | 0.1       | 0.5       |
|                        | Equipment (Off-Road/Farm)    | 1.1       | 17.8      |
| <b>Totals</b>          |                              | <b>35</b> | <b>82</b> |

<sup>a</sup> From Appendix A in the Sacramento PM<sub>10</sub> Maintenance Plan.

Based on our review of the emissions inventories (and related documentation) from the Sacramento PM<sub>10</sub> Maintenance Plan, we find that the inventories for 2008 are comprehensive, that the methods and assumptions used by CARB and SMAQMD to develop the emission inventories are reasonable, and that the 2008 inventory reasonably estimates actual PM<sub>10</sub> emissions in the

attainment year. Therefore, we are proposing to approve the 2008 inventory, which serves as the Sacramento PM<sub>10</sub> Maintenance Plan's attainment year inventory, as satisfying the requirements of section 172(c)(3) of the CAA for the purposes of redesignation of the Sacramento PM<sub>10</sub> nonattainment area to attainment of the 24-hour PM<sub>10</sub> NAAQS.

## 2. Maintenance Demonstration

Section 175A(a) of the CAA requires that the maintenance plan "provide for the maintenance of the national primary ambient air quality standard for such air pollutant in the area concerned for at least 10 years after the redesignation." Generally, a state may demonstrate maintenance of the 24-hour PM<sub>10</sub> NAAQS by modeling to show that the future mix of sources and emissions rates will not cause a violation of the NAAQS. A showing that future emissions will not exceed the level of the attainment year inventory can also be used to further support of a maintenance demonstration. For areas that are required under the Act to submit modeled attainment demonstrations, the maintenance demonstration should use the same type of modeling. Calcagni memorandum, page 9.

In addition to accounting for area-wide growth trends, SMAQMD included growth in airport emissions to accommodate future airport expansions within the Sacramento County Airport

System.<sup>33</sup> The portion of the 2012 and 2022 inventories associated with airports is detailed in table 5.

**Table 5. Airport Emissions for Sacramento County Only, Total Daily Emissions (tons per day, average winter day)<sup>a</sup>**

| Emission Source          | NO <sub>x</sub> |      | PM <sub>10</sub> |      |
|--------------------------|-----------------|------|------------------|------|
|                          | 2012            | 2022 | 2012             | 2022 |
| Aircraft Operations Only | 2.3             | 3.0  | 0.1              | 0.1  |
| Ground Support Equipment | 0.3             | 0.2  | 0.1              | 0.1  |

<sup>a</sup> From table 4-4 in the Sacramento PM<sub>10</sub> Maintenance Plan.

SMAQMD also included emissions reduction credits (ERCs) from pre-2008 ERCs, future bankable rice burning ERCs, and the wood stove/fireplace change out incentive program in the event that the ERCs are used for the purposes of issuing permits for new or modified stationary sources in the air quality planning area.<sup>34</sup>

We have reviewed the methods and assumptions, as described in connection with the attainment inventory, that SMAQMD used to project emissions to 2012 and 2022 for the various source categories and find them to be reasonable. The Sacramento PM<sub>10</sub> Maintenance Plan's maintenance demonstration is based on the use of Chemical Mass Balance (CMB) with proportional rollback (69 FR 5412, 5424-5425 and 69 FR 30006) to demonstrate maintenance of the 24-hour PM<sub>10</sub> standard until 2022. See Plan, pp. 6-1 - 6-5. Under proportional rollback, changes in source categories'

<sup>33</sup> See Sacramento PM10 Maintenance Plan, section 4.7, page 4-10.

<sup>34</sup> See Sacramento PM10 Maintenance Plan, section 4.7, page 4-11.

emissions are added in proportion to their corresponding component from CMB. In proportional rollback, a 1% change in direct PM<sub>10</sub> emissions causes a 1% change in the direct PM<sub>10</sub> ambient component. However, because ammonium nitrate is secondary PM, that is, it is formed from chemical reactions in the air, it does not necessarily scale one-to-one with the precursor NO<sub>x</sub> emissions. The Plan relied on photochemical modeling results showing that a 1% change in NO<sub>x</sub> emission causes only a 0.7% change in ammonium nitrate. See Plan, p.6-3.

The results of the modeling show that all monitoring sites in the Sacramento PM<sub>10</sub> nonattainment area will be below the 24-hour PM<sub>10</sub> NAAQS in 2022, with the projected value of 99 µg/m<sup>3</sup> at the T Street site, which had the peak monitored value from 2006-2008 in the Sacramento PM<sub>10</sub> nonattainment area. See Plan, Table 6.3.

In addition to the CMB rollback modeling in the Sacramento PM<sub>10</sub> Maintenance Plan, it also demonstrates that the 2022 maintenance year inventory is well below the 2008 attainment year inventory for PM<sub>10</sub> precursors (i.e., NO<sub>x</sub>) and flat for direct PM<sub>10</sub>. Thus, even without the rollback analysis previously described, the Plan clearly demonstrates maintenance of the PM<sub>10</sub> NAAQS through 2022. Tables 6, 7 and 8 compare inventory estimates for direct PM<sub>10</sub> and PM<sub>10</sub> precursor (i.e., NO<sub>x</sub>) for various years, including the 2008 attainment year, 2012, and the

2022 maintenance year. Since current ambient concentrations are well below the NAAQS, the slight increase in projected direct PM<sub>10</sub> emissions is consistent with maintenance of the NAAQS. Even if all ambient PM<sub>10</sub> were directly emitted (i.e., without accounting for the benefit of NO<sub>x</sub> reductions), the 2008 measured ambient level of 109 µg/m<sup>3</sup> could increase by 37% and remain below the NAAQS, so direct PM<sub>10</sub> emissions could also increase by 37% and the area would remain in attainment. In fact, direct PM<sub>10</sub> is projected to increase by only 3% (or 7% considering potential increases in road dust allowed for in the Motor Vehicle Emissions Budget). This is a very conservative conclusion, because it assumes NO<sub>x</sub> emissions are constant, whereas they are actually projected to decrease by 50%, with an accompanying reduction in the ammonium nitrate component of PM<sub>10</sub>. The effects of the declining NO<sub>x</sub> and slightly increasing PM constitute a variant of simple rollback modeling, and can be considered a second, supporting maintenance demonstration method in addition to the CMB proportional rollback demonstration.

**Table 6: Summary of 2008 Actual and 2012 and 2022 Projected PM<sub>10</sub> and NO<sub>x</sub> Emissions in the Sacramento PM<sub>10</sub> Nonattainment Area (tons per day, average winter day)<sup>a</sup>**

| Pollutants       | 2008 | 2012 | 2022 |
|------------------|------|------|------|
| PM <sub>10</sub> | 35   | 35   | 36   |
| NO <sub>x</sub>  | 82   | 67   | 42   |

<sup>a</sup> From Appendix A in the Sacramento PM<sub>10</sub> Maintenance Plan; includes Emission Reduction Credits in 2012 and 2022 for PM<sub>10</sub> and NO<sub>x</sub> in table 4-5 of the Sacramento PM<sub>10</sub> Maintenance Plan.

Based on our review of the 2012 and 2022 emissions inventories and related documentation from the Sacramento PM<sub>10</sub> Maintenance Plan, we find that the 2012 and 2022 emissions inventories in the PM<sub>10</sub> Maintenance Plan reflect the latest planning assumptions and emissions models available at the time the Plan was developed, and provide a comprehensive and reasonably accurate basis upon which to forecast direct PM<sub>10</sub> and PM<sub>10</sub> precursor emissions for years 2012 and 2022.<sup>35</sup> These inventories further support maintenance through 2022.

**Table 7: 2008 Actual and 2012 and 2022 Projected PM<sub>10</sub> Emissions from various source categories in the Sacramento PM<sub>10</sub> Nonattainment Area, Total Daily Emissions (tons per day, average winter day)<sup>a</sup>**

| Category   | Emission Source             | PM <sub>10</sub> |      |      |
|------------|-----------------------------|------------------|------|------|
|            |                             | 2008             | 2012 | 2022 |
| Stationary | Fuel Combustion             | 0.5              | 0.5  | 0.6  |
|            | Industrial Processes        | 1.0              | 0.9  | 1.1  |
| Area wide  | Residential Fuel Combustion | 9.9              | 9.2  | 10.2 |
|            | Farming Operations          | 2.4              | 2.3  | 2.1  |
|            | Construction and Demolition | 7.0              | 7.2  | 7.8  |
|            | Paved Road Dust             | 6.1              | 6.2  | 6.4  |
|            | Unpaved Road Dust           | 3.6              | 3.6  | 3.6  |

<sup>35</sup> The 2022 emission inventory includes emissions reductions from State measures adopted through 2006. Because the measures in Table 3 were adopted after 2006, the 2022 inventory is a conservative estimate of the projected emissions. December 27, 2012 email from Martin Johnson of CARB to John Ungvarsky, EPA.

|                        |                           |           |           |           |
|------------------------|---------------------------|-----------|-----------|-----------|
|                        | Other                     | 1.2       | 1.3       | 1.4       |
| On-Road Motor Vehicles | On-Road Motor Vehicles    | 2.2       | 2.1       | 2.1       |
| Other Mobile           | Aircraft                  | 0.1       | 0.1       | 0.1       |
|                        | Trains                    | 0.1       | 0.1       | 0.1       |
|                        | Boats                     | 0.1       | 0.1       | 0.1       |
|                        | Equipment (Off-Road/Farm) | 1.1       | 1.0       | 0.4       |
| <b>Totals</b>          |                           | <b>35</b> | <b>35</b> | <b>36</b> |

<sup>a</sup> From Appendix A in the Sacramento PM<sub>10</sub> Maintenance Plan.

**Table 8: 2008 and Projected 2012 and 2022 NO<sub>x</sub> Emissions from various source categories in the Sacramento PM<sub>10</sub> Nonattainment Area, Total Daily Emissions (tons per day, average winter day)<sup>a</sup>**

| Category               | Emission Source              | NO <sub>x</sub> |      |      |
|------------------------|------------------------------|-----------------|------|------|
|                        |                              | 2008            | 2012 | 2022 |
| Stationary             | Fuel Combustion              | 3.9             | 4.0  | 4.2  |
|                        | Industrial Processes         | 0.1             | 0.1  | 0.1  |
| Areawide               | Residential Fuel Combustion  | 4.4             | 4.3  | 4.4  |
|                        | Managed Burning and Disposal | 0.1             | 0.1  | 0.1  |
| On-Road Motor Vehicles | On-Road Motor Vehicles       | 49.6            | 37.6 | 18.1 |
| Other Mobile           | Aircraft                     | 2.0             | 2.3  | 3.0  |
|                        | Trains                       | 3.4             | 3.3  | 3.6  |
|                        | Boats                        | 0.5             | 0.5  | 0.5  |

|               |                    |           |           |           |
|---------------|--------------------|-----------|-----------|-----------|
|               | Off-Road Equipment | 16.0      | 13.6      | 7.6       |
|               | Farm Equipment     | 1.8       | 1.4       | 0.6       |
| <b>Totals</b> |                    | <b>82</b> | <b>67</b> | <b>42</b> |

<sup>a</sup> From Appendix A in the Sacramento PM<sub>10</sub> Maintenance Plan.

Taking the CMB results into account gives an even stronger conclusion with respect to the acceptability of the slight increase of direct PM<sub>10</sub> emissions. According to the CMB proportional rollback, direct PM<sub>10</sub> contributes 81 µg/m<sup>3</sup> of the 2008 total. See Plan, Table 6.3, p.6-5. Considering the measured 109 µg/m<sup>3</sup>, that component could increase by 41 µg/m<sup>3</sup>, or 50%, and the sum would remain below the NAAQS. When combined, the projected slight PM<sub>10</sub> emissions increase and substantial NO<sub>x</sub> emissions decrease are well below the levels consistent with attainment through the 2022 maintenance period and thereby adequately demonstrate maintenance through that period.

a. Showing That Maintenance Plan Provides for Ten Years of Maintenance Through 2023

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the area "for at least 10 years after the redesignation." EPA has interpreted this as a showing of maintenance "for a period of ten years following

redesignation." September 4, 1992 Memorandum from John Calcagni, Director, AQMD, "Procedures for Processing Requests to Redesignate Areas to Attainment," p. 9.

As discussed in detail above, the Sacramento PM<sub>10</sub> Maintenance Plan expressly documents that the area's emissions inventories will remain below the attainment year inventories through 2022. In addition, for the reasons set forth below, EPA believes that the State's submission, in conjunction with additional supporting information, further demonstrates that the area will continue to maintain the 24-hour PM<sub>10</sub> NAAQS at least through 2023. Thus, if EPA finalizes its proposed approval of the redesignation request and maintenance plans in 2013, it will be based in part on a showing, in accordance with section 175A, that the Sacramento PM<sub>10</sub> Maintenance Plan provides for maintenance for at least ten years after redesignation. EPA believes the area will continue to maintain the 24-hour PM<sub>10</sub> NAAQS at least through 2023 for the following reasons.

1. Significant emissions controls remain in place and will continue to provide reductions that keep the area in attainment. Because the Sacramento area is currently nonattainment for the 1997 and 2008 ozone standards and the 2006 24-hour PM<sub>2.5</sub> standard, it is expected that not only will existing emissions controls remain in place, but the Sacramento area may need additional reductions (e.g., NO<sub>x</sub>)

to attain the aforementioned standards. In addition, the emissions controls that brought the area into attainment cannot be removed from the SIP unless the State demonstrates that the removal would be consistent with sections 110(1) and 193 of the CAA.

2. The 2022 projected emissions inventory for PM<sub>10</sub> precursors is well below the 2008 attainment year level and is expected to decline or remain stable during the 2022 to 2023 period. It is extremely improbable that emissions would increase between 2022 and 2023 such that they would exceed the 2008 attainment year levels. As shown in table 7, while primary PM<sub>10</sub> emissions have remained relatively flat, by 2022 NO<sub>x</sub> emissions are projected to decline by approximately 70% and 49% when compared to 1990 and 2008, respectively. The majority of these reductions resulted from cleaner fuels, tighter emission standards, and fleet turnover in the mobile source sector. The 2022 emission inventory is conservative in that it does not include reductions from State measures adopted after 2006. Because Sacramento is nonattainment for the 1997 and 2008 ozone standards and the 2006 24-hour PM<sub>2.5</sub> standard, SMAQMD and the State may need to adopt additional measures that will further reduce emissions between 2013 and 2023. Because fundamental relaxations or changes to the existing SIP-

approved measures, mobile source fleet, and infrastructure cannot be easily made or reversed during the 2022-2023 period, it is highly unlikely that PM<sub>10</sub> and PM<sub>10</sub> precursor emissions would increase significantly between 2022 and 2023 to the extent it would jeopardize a showing of maintenance for a 10-year period after redesignation.

3. Fleet turnover supports a continued gradual decrease in emission levels beyond 2025. Specifically, California's Low Emission Vehicle (LEV) program sets gasoline and vehicle emissions standards for passenger cars, light trucks, and larger passenger vehicles. The program was designed to reduce emissions, including NO<sub>x</sub>, responsible for the ozone and particulate matter impacts from these vehicles. The LEV 2 standards were phased in between 2004 and 2010, have been replaced by the LEV 3 standards adopted in 2012. The LEV 3 standards represent a further strengthening of the program and are planned to be phased in between 2015 and 2025. Consequently, the full emission reduction benefits from the LEV 2 and 3 standards will not be achieved until after 2022 and continue beyond 2023.<sup>36</sup> The relationship between the LEV

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<sup>36</sup> 2011 records from CARB's inspection and maintenance program indicate approximately 20% of the fleet had not yet turned over after 15 years. It is reasonable to assume that because the LEV 2 standards were not fully implemented until 2009, the reductions from the program will continue through 2023, which would represent the 14 years of turnover affected by the LEV 2 standards. Thus, it is reasonable to conclude reductions from fleet turnover would continue even beyond 2023. To see the report, go to:

standards and fleet turnover is just one example of a measure providing continued NO<sub>x</sub> emissions reductions between 2022 and 2023 because of continued fleet turnover.

4. Air quality concentrations are well below the 24-hour PM<sub>10</sub> NAAQS, and, when coupled with the emissions inventory projections through 2022, clearly show it would be very unlikely for a PM<sub>10</sub> violation to occur in 2023. The Sacramento PM<sub>10</sub> nonattainment area has not violated the 24-hour PM<sub>10</sub> NAAQS since 1990. Air quality concentrations for the three most recent years (2009–2011) of complete, quality-assured, and certified ambient air monitoring data show the highest monitored PM<sub>10</sub> concentration to be 76 µg/m<sup>3</sup>, approximately half of the PM<sub>10</sub> NAAQS. The historical trend of the maximum 24-hour PM<sub>10</sub> peak concentrations between 1989 and 2011 indicates a steady decline.<sup>37</sup> As shown in table 7, by 2022 PM<sub>10</sub> precursor emissions (NO<sub>x</sub>) will drop significantly compared to 2008, and direct PM<sub>10</sub> emissions will remain relatively flat. The combination of the air quality concentrations well below the standard and the declining inventory as described above indicate it is highly unlikely that the Sacramento PM<sub>10</sub> nonattainment area

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[http://www.bar.ca.gov/80\\_BARResources/04\\_Miscellaneous/USEPA%202010%20Calendar%20Year.pdf](http://www.bar.ca.gov/80_BARResources/04_Miscellaneous/USEPA%202010%20Calendar%20Year.pdf).

<sup>37</sup> See Sacramento PM<sub>10</sub> Maintenance Plan, Figure 3.3, page 3-7.

will violate the 24-hour PM<sub>10</sub> NAAQS during the 2022 to 2023 period.

For the above reasons, EPA believes the area will continue to maintain the 24-hour PM<sub>10</sub> NAAQS at least through 2023 and that the Sacramento PM<sub>10</sub> Maintenance Plan shows maintenance for a period of ten years following redesignation. Thus, if EPA finalizes its proposed approval of the Sacramento PM<sub>10</sub> Maintenance Plan in 2013, it is based on a showing, in accordance with section 175A, that the Sacramento PM<sub>10</sub> Maintenance Plan provides for maintenance for at least ten years after redesignation.

### 3. Verification of Continued Attainment

In demonstrating maintenance, continued attainment of the NAAQS can be verified through operation of an appropriate air quality monitoring network. The Calcagni memorandum states that the maintenance plan should contain provisions for continued operation of air quality monitors that will provide such verification. Calcagni memorandum, p. 11. As discussed in section V.A. of this document, PM<sub>10</sub> is currently monitored by SMAQMD (five sites) and CARB (one site) within the Sacramento PM<sub>10</sub> nonattainment area. In the Sacramento PM<sub>10</sub> Maintenance Plan (see Plan, p. 7-1), SMAQMD indicates its intention to continue operation of an air quality monitoring network that meets or exceeds the minimum monitoring requirements and that ambient PM<sub>10</sub>

concentrations will be monitored appropriately to verify continued attainment of the 24-hour PM<sub>10</sub> NAAQS. The Sacramento PM<sub>10</sub> Maintenance Plan also notes that a review of the entire monitoring network will be undertaken annually as required by federal regulations.<sup>38</sup> We find the SMAQMD's commitment for continued ambient PM<sub>10</sub> monitoring as set forth in the Sacramento PM<sub>10</sub> Maintenance Plan to be acceptable.

Second, the transportation conformity process, which would require a comparison of on-road motor vehicle emissions that would occur under new or amended regional transportation plans and programs with the MVEBs in the PM<sub>10</sub> Maintenance Plan, represents another means by which to verify continued attainment of the 24-hour PM<sub>10</sub> NAAQS in Sacramento County. See page 8-1 of the Sacramento PM<sub>10</sub> Maintenance Plan.

Lastly, while not cited in the Plan, CARB and SMAQMD must inventory emissions sources and report to EPA on a periodic basis under 40 CFR part 51, subpart A ("Air Emissions Reporting Requirements"). These emissions inventory updates will provide a third way to evaluate emissions trends in the area and thereby verify continued attainment of the NAAQS. These methods are sufficient for the purpose of verifying continued attainment.

#### 4. Contingency Provisions

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<sup>38</sup> EPA's requirements for annual review of monitoring networks are found at 40 CFR 58.10.

Section 175A(d) of the Clean Air Act requires that maintenance plans include contingency provisions, as EPA deems necessary, to promptly correct any violations of the NAAQS that occur after redesignation of the area. Such provisions must include a requirement that the State will implement all measures with respect to the control of the air pollutant concerned that were contained in the SIP for the area before redesignation of the area as an attainment area. These contingency provisions are distinguished from those generally required for nonattainment areas under section 172(c)(9) in that they are not required to be fully-adopted measures that will take effect without further action by the state in order for the maintenance plan to be approved. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered by a specified event.

Under section 175A(d), contingency measures identified in the contingency plan do not have to be fully adopted at the time of redesignation. However, the contingency plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted expeditiously once they are triggered by a specified event. The maintenance plan should clearly identify the measures to be adopted, a schedule and procedure for adoption and implementation, and a specific

timeline for action by the State. As a necessary part of the plan, the State should also identify specific indicators or triggers, which will be used to determine when the contingency measures need to be implemented.

As required by section 175A of the CAA, SMAQMD has adopted a contingency plan to address possible future PM<sub>10</sub> air quality problems. The contingency provisions in the Sacramento PM<sub>10</sub> Maintenance Plan are contained in section 7.3 of the Plan and were clarified in a subsequent letter from the District.<sup>39</sup> After verification of the 24-hour PM<sub>10</sub> NAAQS violation, including allowing sufficient time for sample weighing and processing, SMAQMD commits to the following steps.

(1) Examine the violation to determine if it qualifies as a natural or exceptional event.

(2) If the violation was not a natural or exceptional event, SMAQMD will analyze the event to determine its plausible causes. Any applicable emission reductions from already adopted rules that have not yet been implemented would be evaluated to determine if these new emission reductions would be sufficient to prevent future PM<sub>10</sub> exceedances. These already adopted controls could include CARB and SMAQMD PM<sub>2.5</sub> and NO<sub>x</sub> measures to address ozone and PM<sub>2.5</sub> SIP requirements. In addition, the SMAQMD

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<sup>39</sup> See letter, Larry Greene, Executive Officer, SMAQMD, to Deborah Jordan, Director, Air Division, US EPA, Region 9, dated June 28, 2013.

would evaluate applicable reasonably available control measures (RACM) that could potentially provide the corrective action needed. This evaluation step will take no more than 18 months.

(3) If the additional emission reductions from already adopted rules are insufficient, the SMAQMD would proceed with selecting specific RACM measures for adoption and implementation that would be applicable to addressing the seasonal PM<sub>10</sub> problem. Appendix B in the Sacramento PM<sub>10</sub> Maintenance Plan contains potential RACM measures to be evaluated for future adoption and implementation. This adoption and implementation step will take no more than 12 months.

In their June 28, 2013 letter, SMAQMD clarified that all three of the aforementioned steps will be completed, including the implementation of additional control measures, within 24 months.

Upon our review of the Plan, as summarized above, we find that the contingency provisions of the Sacramento PM<sub>10</sub> Maintenance Plan clearly identify specific contingency measures, contain tracking and triggering mechanisms to determine when contingency measures are needed, contain a description of the process of recommending and implementing contingency measures, and contain specific timelines for action. Thus, we conclude that the contingency provisions of the Sacramento PM<sub>10</sub> Maintenance Plan are adequate to ensure prompt correction of a

violation and therefore comply with section 175A(d) of the Act. For the reasons set forth above, EPA is proposing to find that the Sacramento PM<sub>10</sub> Maintenance Plan is consistent with the maintenance plan contingency provision requirements of the CAA and EPA guidance.

#### 5. Subsequent Maintenance Plan Revisions

Section 175A(b) of the CAA provides that eight years after redesignation, the State must submit a revised maintenance plan that demonstrates continued attainment for the subsequent ten-year period following the initial ten-year maintenance period. The Sacramento PM<sub>10</sub> Maintenance Plan includes a SMAQMD commitment to prepare and submit a revised maintenance plan in 2020, seven years after redesignation to attainment. See page 6-7 of the Sacramento PM<sub>10</sub> Maintenance Plan.

In light of the discussion set forth above, EPA is proposing to approve the Sacramento PM<sub>10</sub> Maintenance Plan as meeting the requirements of CAA section 175A.

#### 6. Transportation Conformity and Motor Vehicle Emissions Budgets

##### a. Requirements for Transportation Conformity and Motor Vehicle Emissions Budgets

Under section 176(c) of the CAA, transportation plans, programs and projects in the nonattainment or maintenance areas that are funded or approved under title 23 U.S.C. and the

Federal Transit Laws (49 U.S.C. chapter 53) must conform to the applicable SIP. In short, a transportation plan and program are deemed to conform to the applicable SIP if the emissions resulting from the implementation of that transportation plan and program are less than or equal to the motor vehicle emissions budgets (budgets) established in the SIP for the attainment year, maintenance year and other years. See, generally, 40 CFR part 93 for the federal conformity regulations and 40 CFR 93.118 specifically for how budgets are used in conformity.

The budgets serve as a ceiling on emissions that would result from an area's planned transportation system. The budget concept is further explained in the preamble to the November 24, 1993, transportation conformity rule (58 FR 62188). Maintenance plan submittals must specify the maximum emissions of transportation-related PM<sub>10</sub> and NO<sub>x</sub> emissions allowed in the last year of the maintenance period, i.e., the motor vehicle emissions budgets (MVEBs). (MVEBs may also be specified for additional years during the maintenance period.) The submittal must also demonstrate that these emissions levels, when considered with emissions from all other sources, are consistent with maintenance of the NAAQS.

b. Motor Vehicle Emissions Budgets in the Sacramento PM<sub>10</sub> Maintenance Plan

The Sacramento PM<sub>10</sub> Maintenance Plan contains PM<sub>10</sub> and NO<sub>x</sub> MVEBs for the Sacramento PM<sub>10</sub> nonattainment area for 2008, 2012, and 2022. The MVEBs are the on-road mobile source primary PM<sub>10</sub> and NO<sub>x</sub> (as a PM<sub>10</sub> precursor) emissions for Sacramento County for 2008, 2012 and 2022. The MVEBs are compatible with the 2008, 2012, and 2022 on-road mobile source PM<sub>10</sub> and NO<sub>x</sub> emissions included in SMAQMD's 2008, 2012, and 2022 PM<sub>10</sub> and NO<sub>x</sub> emission inventories, as summarized above in tables 6, 7 and 8. The derivation of the MVEBs is thoroughly discussed in section 8 of the Sacramento PM<sub>10</sub> Maintenance Plan.<sup>40</sup> The motor vehicle emissions budgets for Sacramento are summarized in table 9.

**Table 9: Summary of Motor Vehicle Emissions Budgets (tons per day, average winter day) in the Sacramento PM<sub>10</sub> Maintenance Plan<sup>41</sup>**

| Budget Year | PM <sub>10</sub> | NO <sub>x</sub> |
|-------------|------------------|-----------------|
| 2008        | 15               | 50              |
| 2012        | 15               | 38              |
| 2022        | 17               | 19              |

The details for each component of the budgets are shown in table 10 and are comprised of direct on-road mobile source emissions, road construction emissions, fugitive emissions from paved and unpaved roads, and safety margins. A state may choose to apply a safety margin under our transportation conformity rule so long as such margins are explicitly quantified in the applicable plan and are shown to be consistent with attainment

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<sup>40</sup> Additional information associated with the motor vehicle emission budget calculations is provided in a technical analysis accompanying June 2013 letters from ARB and SMAQMD to EPA.

<sup>41</sup> See Table 8.1, page 8-4 of the Sacramento PM<sub>10</sub> Maintenance Plan.

or maintenance of the NAAQS (whichever is relevant to the particular plan).<sup>42</sup> In this instance, the safety margin has been explicitly quantified and shown to be consistent with continued maintenance of the PM<sub>10</sub> NAAQS through the applicable maintenance period, through 2023. The MVEBs incorporate: (1) on-road motor vehicle emission inventory factors of EMFAC2007<sup>43</sup> and AP-42;<sup>44</sup> and (2) updated recent vehicle activity data from Sacramento Area Council of Governments' Sacramento Activity-Based Travel Demand Simulation Model transportation modeling system.

**Table 10: Source Categories and Emissions Comprising the Motor Vehicle Emissions Budgets (tons per day, average winter day) in the Sacramento PM<sub>10</sub> Maintenance Plan<sup>45</sup>**

| Category                    | 2008            |                  | 2012            |                  | 2022            |                  |
|-----------------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
|                             | NO <sub>x</sub> | PM <sub>10</sub> | NO <sub>x</sub> | PM <sub>10</sub> | NO <sub>x</sub> | PM <sub>10</sub> |
| Direct Exhaust <sup>a</sup> | 49.6            | 2.2              | 37.6            | 2.1              | 18.1            | 2.1              |
| Paved Road Dust             | --              | 6.1              | --              | 4.9              | --              | 5.5              |
| Unpaved Road Dust           | --              | 3.6              | --              | 3.6              | --              | 3.6              |
| Road Construction Dust      | --              | 2.7              | --              | 2.8              | --              | 2.8              |
| Safety Margin <sup>46</sup> | --              | --               | --              | 1.3              | --              | 2.5              |

<sup>42</sup> See 40 CFR 93.124(a).

<sup>43</sup> EMFAC (Emission Factor) is California's model for estimating emissions from on-road vehicles operating in California. EPA approved EMFAC2007 on January 18, 2008 (73 FR 3464). CARB's latest release is EMFAC 2011 which EPA approved on March 6, 2013 (78 FR 14533) was not approved when this plan was developed.

<sup>44</sup> AP-42, *Compilation of Air Pollutant Emission Factors*, is a document published by EPA as the primary collection of EPA approved emission factor information. The emission factors have been developed and compiled from source test data, material balance studies, and engineering estimates. EPA has publishes supplements and updates to the each of the chapters available in Volume I, Stationary Point and Area Sources at the following web site: <http://www.epa.gov/ttnchie1/ap42/>.

<sup>45</sup> *Ibid.*

<sup>46</sup> The Sacramento PM<sub>10</sub> Maintenance Plan includes PM<sub>10</sub> MVEB safety margins of 1.3 tons per day (tpd) for 2012 and 2.4 tpd for 2022. This additional increase may be needed for the Sacramento Area Council of Governments to make a transportation conformity determinations, including for a horizon year of 2035 or later for transportation planning purposes when using the latest year of motor vehicle emissions budgets (2022) in the Sacramento PM<sub>10</sub> Maintenance Plan. See letter, Larry Greene, Executive Officer, SMAQMD, to Deborah Jordan,

|                                    |    |    |    |    |    |    |
|------------------------------------|----|----|----|----|----|----|
| Totals (rounded up to nearest ton) | 50 | 15 | 38 | 15 | 19 | 17 |
|------------------------------------|----|----|----|----|----|----|

<sup>a</sup> Direct Exhaust includes PM<sub>10</sub> from tire and brake wear.

c. Initial Adequacy Review of Budgets

On September 1, 2011, EPA announced the availability of the Sacramento PM<sub>10</sub> Maintenance Plan with MVEBs and a 30-day public comment period on EPA's Adequacy Web site at:

<http://www.epa.gov/otaq/stateresources/transconf/reg9sips.htm#ca>

. The comment period for this notification ended on October 3, 2011, and EPA received no comments from the public. On November 23, 2011, EPA published in the Federal Register (76 FR 72404) a finding of adequacy for the PM<sub>10</sub> MVEBs for the years 2008, 2012, and 2022.

d. Updated Technical Review

As described earlier, the budgets were developed using emission factors generated by CARB's EMFAC2007 model and AP-42. The paved road emissions were originally calculated using the 2006 version of AP-42 by estimating the 2008 paved road emissions and projecting them to 2012 and 2022. The calculation relied on a California profile of silt loading, weather, and growth in roadway centerline miles.

EPA released an update to *Compilation of Air Pollutant Emission Factors* (AP-42) in January of 2011, which revised the

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Director, Air Division, US EPA, Region 9, dated June 28, 2013. Also see letter, Lynn Terry, Deputy Executive Officer, CARB, to Deborah Jordan, Director, Air Division, US EPA, Region 9, dated June 13, 2013.

equation for estimating paved road dust emissions based on an updated regression that included new emission tests results. CARB staff conducted an additional technical analysis of the Sacramento County paved road emission projections using the updated AP-42 equation and growth in vehicle miles traveled, to ensure that the motor vehicle emission budgets were still consistent with the currently approved modeling tools and data and the maintenance demonstration. The technical analysis showed that the updated paved road emissions provided safety margins in 2012 and 2022 as compared to the attainment inventory emissions of paved road dust which was used in establishing the MVEBs in the Sacramento PM<sub>10</sub> Maintenance Plan.<sup>47</sup> Therefore, the total MVEBs are consistent with maintenance of the standard.

e. Proposed Actions on the Budgets

EPA is proposing to approve the MVEBs for 2008, 2012 and 2022 as part of our approval of Sacramento PM<sub>10</sub> Maintenance Plan. EPA has determined that the MVEB emission targets are consistent with emission control measures in the SIP and that Sacramento County can maintain attainment of the 24-hour PM<sub>10</sub> NAAQS. Because the budgets EPA found adequate in 2011 are the same budgets EPA is proposing to approve in this action, if EPA approves the MVEBs in the final rulemaking action, it would not change the

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<sup>47</sup> See letter, Lynn Terry, Deputy Executive Officer, CARB, to Deborah Jordan, Director, Air Division, US EPA, Region 9, dated June 13, 2013. See Letter, Larry Greene, Executive Director/Air Pollution Control Officer, SMAQMD, to Deborah Jordan, Director Air Division, US EPA, Region 9, dated June 28, 2013.

budgets currently in use for future transportation conformity determinations for Sacramento County. As discussed in section V.D.2.a of this notice, EPA is proposing that if this approval is finalized in 2013 the area will continue to maintain the 24-hour PM<sub>10</sub> NAAQS through at least 2023. Consistent with this proposal, EPA is proposing to approve the MVEBs submitted by the State in the Sacramento PM<sub>10</sub> Maintenance Plan. EPA is proposing that the submitted budgets, when combined with EPA's additional analysis for the 2022-2023 time period, are consistent with maintenance of the 24-hour PM<sub>10</sub> NAAQS through 2023.

#### **VI. Proposed Action and Request for Public Comment**

Based on our review of the Sacramento PM<sub>10</sub> Maintenance Plan submitted by the State, air quality monitoring data, and other relevant materials, EPA is proposing to find that the State has addressed all the necessary requirements for redesignation of the Sacramento nonattainment area to attainment of the PM<sub>10</sub> NAAQS, pursuant to CAA sections 107(d)(3)(E) and 175A.

First, under CAA section 107(d)(3)(D), we are proposing to approve CARB's request, which accompanied the submittal of the Sacramento PM<sub>10</sub> Maintenance Plan, to redesignate the Sacramento PM<sub>10</sub> nonattainment area to attainment for the 24-hour PM<sub>10</sub> NAAQS. We are doing so based on our conclusion that the area has met the five criteria for redesignation under CAA section 107(d)(3)(E). Our conclusion is based on our proposed

determination that the area has attained the 24-hour PM<sub>10</sub> NAAQS; that relevant portions of the California SIP are fully approved; that the improvement in air quality is due to permanent and enforceable reductions in emissions; that California has met all requirements applicable to the Sacramento PM<sub>10</sub> nonattainment area with respect to section 110 and part D of the CAA; and is based on our proposed approval of the Sacramento PM<sub>10</sub> Maintenance Plan as part of this action.

Second, in connection with the Sacramento PM<sub>10</sub> Maintenance Plan and EPA's analysis showing maintenance through 2023, EPA finds that the maintenance demonstration showing how the area will continue to attain the 24-hour PM<sub>10</sub> NAAQS for 10 years beyond redesignation (i.e., through 2023) and the contingency provisions describing the actions that SMAQMD will take in the event of a future monitored violation meet all applicable requirements for maintenance plans and related contingency provisions in section 175A of the CAA. EPA is also proposing to approve the motor vehicle emissions budgets in the Sacramento PM<sub>10</sub> Maintenance Plan because we find they meet the applicable transportation conformity requirements under 40 CFR 93.118(e). Lastly, EPA is proposing to approve the 2008 inventory, which serves as the Sacramento PM<sub>10</sub> Maintenance Plan's attainment year inventory, as satisfying the requirements of section 172(c)(3) of the CAA.

We are soliciting comments on these proposed actions. We will accept comments from the public on this proposal for 30 days following publication of this proposal in the Federal Register. We will consider these comments before taking final action.

## **VII. Statutory and Executive Order Reviews**

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by State law. Redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, these actions merely propose to approve a State plan and redesignation request as meeting federal requirements and do not impose additional requirements beyond those by State law. For these reasons, these proposed actions:

- Are not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
- Do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Are not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Are not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- Do not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law. In addition, there are no federally recognized tribes located within the Sacramento PM<sub>10</sub> nonattainment area.

#### **List of Subjects**

*40 CFR Part 52*

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide.

40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: July 12, 2013.

Alexis Strauss,  
Acting Regional Administrator,  
Region IX.

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