

BOARD MEETING DATE: July 10, 2015

AGENDA NO. 40

PROPOSAL: Request to U.S. EPA to Reclassify South Coast Air Basin as Serious Nonattainment for 24-hour PM2.5 NAAQS

SYNOPSIS: Based on validated 2014 and first quarter 2015 ambient 24-hour PM2.5 measurements at the Mira Loma monitoring station, the Basin will not attain the NAAQS by the moderate area statutory deadline of 2015, largely due to the lack of rainy days over the last two winters. Under the Clean Air Act, the U.S. EPA may reclassify an area as Serious nonattainment if the area cannot practicably attain the NAAQS by the attainment date. This action is to request approval to transmit a letter to U.S. EPA to request this “bump up” to a Serious classification, while emphasizing the need for the federal government to do its fair share to control air pollution sources under their jurisdiction.

COMMITTEE: No Committee Review

RECOMMENDED ACTIONS:

Direct staff to request the U.S. EPA to reclassify the South Coast Air Basin as a Serious nonattainment area for the 24-hour PM2.5 NAAQS.

Barry R. Wallerstein, D.Env.
Executive Officer

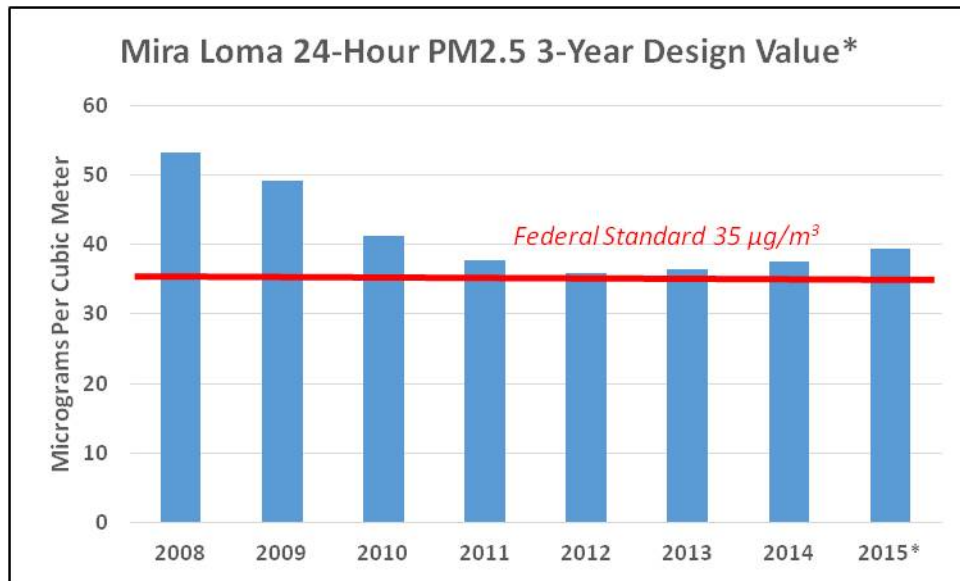
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Background

At its February 2015 meeting, the Board approved the "Supplement to 24-Hour PM2.5 State Implementation Plan for the South Coast Air Basin" which updated the 2012 AQMP attainment demonstration for the 2006 24-hour PM2.5 National Ambient Air Quality Standard (NAAQS) (35 µg/m³) with an attainment date of 2015. The supplement, which was submitted to the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (U.S. EPA), was in response to a court decision (*Natural Res. Def. Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013)) which compelled

U.S. EPA to evaluate the 24-hour PM_{2.5} SIP under CAA, Title 1, Part D, Subpart 4 (hereafter “Subpart 4”) requirements specific to particulate matter. Subpart 4 provides for an attainment year of 2015 for Moderate designated areas, one year later than the attainment year in the 2012 AQMP (2014). Subpart 4 requirements allow for an additional “extension” year to attain the standard (2016) provided that the single year (2015) ambient 98th percentile PM_{2.5} air quality meets the 24-hour PM_{2.5} NAAQS concentration level of 35 µg/m³. Since the supplement was approved by the Board, analysis of the final 2014 ambient PM_{2.5} air quality data indicates that the South Coast Air Basin (Basin) did not meet the 2006 24-hour PM_{2.5} NAAQS by the end of 2014, and preliminary ambient 24-hour PM_{2.5} measurements in the first quarter of 2015 indicate that the Basin will also not attain by or be eligible for an extension beyond, the statutory deadline of 2015 (see chart below). The inability to attain is due to the need for greater emission reductions and the continuing extreme drought conditions that are impacting not only the Basin, but the entire western United States.

Only one monitoring location in the Basin, Mira Loma, exceeds the 24-hour PM_{2.5} NAAQS. The Basin 2013 design value (based on data from 2011-2013) at Mira Loma was 36 µg/m³. The drought's impact was apparent in 2014 when higher concentrations were measured during the winter months of January and February, typically months characterized by frequent rain events and good atmospheric dispersion. Based on final 2014 data, the 98th percentile concentration (8th highest) measured at Mira Loma was 40.1 µg/m³.



* 1st Quarter data only

Much like the winter of 2014, weather patterns in January and February 2015 shifted expected storms away from California. January 2015 experienced only one-third of the average rainfall, and the number of rain events was well below normal. As a consequence, cold clear nights led to strong low-level inversions and stagnation for most of January. 24-hour PM_{2.5} average concentrations exceeded 35 µg/m³ on 10 days

during the first three weeks of the year. Since the 8th highest preliminary 24-hour PM_{2.5} average concentration has already exceeded 35 µg/m³, attainment, as well as eligibility for the extension, under Moderate area classification is not feasible.

Proposal

Staff proposes to request that U.S. EPA reclassify the Basin as Serious PM_{2.5} nonattainment based on the impracticability of attaining the standard by the attainment date (*see attached Draft letter to EPA*). This action will necessitate the development of a new Serious area SIP, including an attainment demonstration with an attainment deadline as early as practicable but no later than December 31, 2019. Furthermore, the Serious classification will require SCAQMD rule amendments to lower the New Source Review (NSR) threshold for PM_{2.5} and precursor emissions from the 100 TPY year level to 70 TPY within 12 months after reclassification is final. In addition, the Serious area SIP will require a Best Available Control Measure/Best Available Control Technology (BACM/BACT) SIP submittal and an updated Reasonable Further Progress (RFP) analysis. A Serious area SIP for the 24-hour PM_{2.5} NAAQS will be developed as a component of the 2016 AQMP for submission to U.S. EPA.

Resource Impacts

Development of a Serious area SIP would be concurrent with the development of the 2016 AQMP. This action would require revisions to the PM_{2.5} attainment demonstration, NSR thresholds, RFP and a new BACT/BACM analysis. In addition, the 2016 AQMP California Environmental Quality Act and Socioeconomic analyses will be required and staff resources are projected to be adequate to meet this objective.

Attachment

Draft Reclassification Request letter to U.S. EPA with Attachment (Mira Loma PM_{2.5} Data)

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ATTACHMENT

*Office of the Executive Officer
Barry R. Wallerstein, D.Env
909.396.2100, fax 909.396.3340*

July 10, 2015

Ms. Deborah Jordan
Air Division Director
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Request to U.S. EPA to Reclassify the South Coast Air Basin as Serious Nonattainment for the 24-hour PM_{2.5} National Ambient Air Quality Standard (NAAQS)

In December 2012, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the 2012 Air Quality Management Plan (AQMP) demonstrating attainment of the 24-hour PM_{2.5} NAAQS ($35 \mu\text{g}/\text{m}^3$) followed by a Supplement to the 24-hour PM_{2.5} State Implementation Plan (SIP) for the South Coast Air Basin (Basin), approved in February 2015, demonstrating attainment by 2015 under Clean Air Act (CAA), Title 1, Part D, Subpart 4.

The Mira Loma air quality monitoring station is the only location in the Basin that exceeds the 24-hour PM_{2.5} NAAQS, and preliminary ambient 24-hour PM_{2.5} measurements at that station for the first quarter of 2015 (*see Attachment 1*) indicate that the Basin will not attain the NAAQS by the moderate area statutory deadline of 2015. Even considering only 1st quarter 2015 measurements, the 98th percentile of the 2015 24-hour PM_{2.5} mass at the Mira Loma location is $41 \mu\text{g}/\text{m}^3$, producing a 3-year design value at a minimum of $39 \mu\text{g}/\text{m}^3$, thus exceeding the NAAQS. The inability to attain the NAAQS is largely due to the lack of rainy days in January and February of 2014 and 2015, which experienced 33 percent of the average rainfall.

Under the CAA Subpart 4, Section 188(b)(1), the U.S. EPA may reclassify as a Serious nonattainment area any area that cannot practicably attain the NAAQS by the attainment date. This letter serves as the formal request to U.S. EPA to reclassify the South Coast Air Basin as a Serious nonattainment area for the 24-hour PM_{2.5} NAAQS based on the monitoring data indicating attainment is not practicable by the attainment date. Staff requests that EPA take this action at the same time as it acts on the 2012 PM_{2.5} SIP and 2015 Supplement. SCAQMD staff is also requesting that U.S. EPA approve any applicable elements in the Moderate SIP submitted previously and consider the data submitted herewith in conjunction with the 2012 and 2015 submittals as a demonstration that the area cannot practicably attain by the Moderate area date.

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SCAQMD recognizes that more stringent Serious area requirements would apply, including requirements to implement Best Available Control Measures/ Best Available Control Technology, a lower major source threshold (from 100 tons per year to 70 tons per year), and an update to the Reasonable Further Progress (RFP) analysis. A full analysis for implementation of these requirements and a demonstration to ensure attainment as expeditiously as practicable, but not beyond December 31, 2019, will be included in the 2016 AQMP, which is also addressing the annual PM_{2.5} NAAQS.

As discussed in previous correspondence with U.S. EPA, attainment of the NAAQS cannot be achieved without significant additional reductions in federal source emissions. Meeting the 8-hour ozone standards, for example, requires up to 65-75 percent reduction in NO_x emissions. Also, 80 percent of the NO_x emissions are generated by mobile sources, many of which are preempted from state or local regulation (“federal sources”). In 2012, federal sources generated approximately 19 percent of the total NO_x emissions in the Basin and will constitute an estimated 29 percent of total NO_x emissions by 2032. SCAQMD acknowledges the significant air quality benefits accomplished and to be accomplished in the future with NO_x and fuel sulfur requirements imposed on ships operating in coastal Emission Control Areas, but it is critical that further emission reductions are achieved from other federal sources, such as railroads, aircraft, and interstate heavy-duty trucks. More specifically, new federal engine emission standards (0.02 g/bhp-hr NO_x for heavy-duty on-road engines), additional authority provided to the states, and federal funding for faster deployment of new clean technologies are essential for attainment of the ozone and particulate standards in the South Coast air basin. Attainment will not be possible without federal actions in these areas. If sufficient federal actions are not taken, states should not be held accountable for emissions that they have no authority to control.

SCAQMD is committed to meeting the NAAQS in our region and providing the public a healthy environment and economy in the process. However, without fair share reductions from federal sources, the burden is being unfairly placed on local sources. If you have any questions, please feel free to contact me at (909) 396-2100 or Dr. Philip Fine, Deputy Executive Officer, at (909) 396-2239.

Sincerely,

Barry R. Wallerstein, D.Env.
Executive Officer

Attachment: Mira Loma PM_{2.5} Data

cc: Philip Fine, SCAQMD
Barbara Baird, SCAQMD
Joe Cassmassi, SCAQMD

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Table A1: Days exceeding the 24-hour PM_{2.5} federal standard at the Mira Loma air monitoring station in the first quarter of 2015 with Federal Reference Method (FRM) measurements

Sample Date	Mira Loma 24-Hour PM _{2.5} Mass (µg/m ³)*	Rank
1/20/2015	56.6	1
1/1/2015	55.0	2
1/10/2015	50.0	3
2/4/2015	49.9	4
1/4/2015	47.5	5
2/19/2015	43.7	6
1/19/2015	43.2	7
2/5/2015	41.0	8
2/20/2015	40.1	9
1/8/2015	39.7	10
1/14/2015	39.5	11
1/2/2015	38.5	12
2/17/2015	38.5	12
2/6/2015	38.1	14
1/9/2015	37.2	15
1/11/2015	37.2	15
2/3/2015	36.2	17

* Preliminary data, subject to change in the validation process

Table A2: Mira Loma annual 98th percentile PM_{2.5} concentrations and 3-year design values for 2010 through 2014 and for 2015* with first quarter data

Year	Mira Loma 98th Percentile 24-Hour PM _{2.5} Mass (µg/m ³)	Mira Loma 24-Hour PM _{2.5} 3-Year Design Value (µg/m ³)
2010	36.1	41
2011	36.6	38
2012	35.1	36
2013	37.5	36
2014	40.0	38
2015 1st Quarter*	41.0	39

* Preliminary data, subject to change in the validation process