



Transportation Committee

Meeting Date: April 1, 2021

Agenda Item No. 8

Air Quality Conformity Update and PM-10 Budgets

Information

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Attachments: Yes

Approved by: Matt Carpenter

Referring Committee: Not Applicable

1. Issue:

The Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) is required to provide updated documentation, in the form of a Maintenance Plan, to the Environmental Protection Agency (EPA) to demonstrate that Sacramento County will continue to maintain the public health standard for particulate matter pollution through 2033 in compliance with the federal Clean Air Act.

2. Recommendation:

None; this is for information only. The recommendation for the LUNR Committee is that the SACOG Board of Directors support the use of the updated motor vehicle emissions budgets in Sac Metro Air District's demonstration of the PM-10 health standard by approving new transportation conformity budgets. These budgets will be included in the Sac Metro Air District's Maintenance Plan and used in future SACOG transportation conformity demonstrations.

3. Background/Analysis:

Particle pollution, or particulate matter, is a form of air pollution that comes from sources like construction sites, unpaved roads, fields, smokestacks, or fires. It also forms in the atmosphere as a result of complex chemical reactions with sulfur dioxide and nitrogen oxides, which are air pollutants emitted from power plants, industries, and automobiles. Particulate matter comes in various sizes, two of which have established federal public health standards: 10 micrometers and 2.5 micrometers (PM-10 and PM-2.5). Many studies have shown that high levels of exposure can cause adverse health impacts, such as decreased heart and lung function.

The U.S. EPA sets thresholds, or science-based public health standards, which require state and local air quality agencies to develop plans and take steps to improve air quality to reduce these health impacts. In the Sacramento region, the EPA acted in 2013 on an Implementation/Maintenance Plan and Re-Designation Request which demonstrated the county could meet the health standard through the year 2023. Now, Sac Metro Air District must demonstrate that the county can continue to maintain this standard for another 10 years, through the year 2033.

The documentation that the Sac Metro Air District is developing is called a second Maintenance Plan and it must evaluate all sources of PM-10 emissions to ensure that the contributions from all sources will not exceed the health standard. Sac Metro Air District works with the California Air Resources Board (CARB) to develop

approaches (emission calculation methodologies) for off-road, area-wide, and stationary sources of PM-10. For on-road mobile sources, Sac Metro Air District works with SACOG and CARB to establish motor vehicle emission budgets. Upon approval by the Sac Metro Air District Board, the second Maintenance Plan will be submitted to CARB for action, and then to EPA for final approval. Once fully approved, the vehicle emission budgets will be used by SACOG in future Metropolitan Transportation Plan/Sustainable Communities Strategies (MTP/SCS) and programming decisions as part of our transportation conformity demonstrations. A transportation conformity demonstration is an analysis that checks anticipated emissions from transportation, or on-road mobile sources, at various years in the projected MTP/SCS life cycle. A positive finding means that changes proposed on the transportation network do not impede the ability of the region to achieve the public health standard.

4. Discussion/Analysis:

To develop new emissions budgets for PM-10, CARB utilized SACOG travel model data and a CARB maintained emissions model to estimate PM-10 vehicle emissions from the planned transportation network included in the 2020 MTP/SCS over the demonstration period of 2023 to 2033. Consideration was made for how these emissions will fit with anticipated off-road, area-wide and stationary-sources emissions. The compilation of emissions from all sectors demonstrates a continued achievement of the health standard.

SACOG staff has reviewed these budgets and has worked with the Sac Metro Air District and CARB to ensure that the budgets are achievable. Consideration was given to potential near-term or minor changes to the transportation network and anticipated technical changes to the models used for planning and conformity purposes scheduled by both SACOG and CARB. The budget years for which SACOG will need to perform transportation conformity demonstrations for PM-10 as part of the next MTP/SCS are 2024, 2027, and 2033. Depending on the horizon year of the next MTP/SCS, SACOG will add additional years to this list so that there is no more than a 10-year gap between any transportation conformity demonstration. Meeting these new budget requirements will require continued diligence in monitoring transportation project delivery schedules and scope adjustments.

Attachment A lists the proposed budgets and development information for the years 2024, 2027, and 2033. This attachment was circulated through SACOG's Regional Planning Partnership (RPP), which is the designated interagency consultation body (federal, state, and local) for air quality planning and programming processes. Consensus on the use of the budgets was recommended by this group.

5. Fiscal Impact/Grant Information:

This work is included in the SACOG Overall Work Program and Budget.

6. This staff report aligns with the following SACOG Work Plan Objectives:

Goal 2 : Connected Communities