



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R01-OAR-2018-0789; FRL-9993-57-Region 1]

Air Plan Approval; Massachusetts; Boston Metropolitan Area, Lowell, Springfield, Waltham, and Worcester Second 10-Year Carbon Monoxide Limited Maintenance Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a State Implementation Plan (SIP) revision submitted by the Commonwealth of Massachusetts. This revision includes the second 10-year limited maintenance plan (LMP) for Carbon Monoxide (CO) for the Boston Metropolitan Area, as well as for the cities of Lowell, Springfield, Waltham, and Worcester. This LMP addresses maintenance of the CO National Ambient Air Quality Standard (NAAQS) for a second 10-year period beyond the original re-designation to attainment. This action is being taken under the Clean Air Act (CAA).

DATES: Written comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R01-OAR-2018-0789 at <https://www.regulations.gov>, or via email to garcia.ariel@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the

official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the “For Further Information Contact” section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. Publicly available docket materials are available at <https://www.regulations.gov> or at the U.S. Environmental Protection Agency, EPA Region 1 Regional Office, Air and Radiation Division, Air Quality Branch, 5 Post Office Square – Suite 100, Boston, MA. EPA requests that if at all possible, you contact the contact listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office’s official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Ariel Garcia, Air Quality Branch, U.S. Environmental Protection Agency, EPA Region 1 Regional Office, 5 Post Office Square, Suite 100 (mail code: 05-2), Boston, MA 02109-3912, telephone number (617) 918-1660, email garcia.ariel@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document whenever “we,” “us,” or “our” is used, we mean EPA.

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I. Background and Purpose

Under the provisions outlined in Sections 186 and 187 of the CAA, the Boston metropolitan area, which covers the nine surrounding cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville (the “Boston area”), as well as the cities of Lowell, Springfield, Waltham, and Worcester (the “four city areas”) were designated nonattainment for the CO NAAQS on November 6, 1991 (56 FR 56694). The Boston area was classified as “Moderate” nonattainment and the four city areas were classified as “Not Classified” nonattainment. On December 12, 1994, Massachusetts submitted a re-designation request for the Boston area and on May 25, 2001, Massachusetts submitted a re-designation request for the four city areas. These re-designation requests included a maintenance demonstration and contingency plans that outline Massachusetts’ control strategy for maintenance of the CO NAAQS. The maintenance plan provisions under Section 175A of the CAA require that maintenance of the relevant NAAQS be provided for at least 10 years after re-designation, followed by an additional 10-year maintenance period.

On January 30, 1996, the Boston area was re-designated to attainment and EPA approved the first maintenance plan for this area (61 FR 2918). On February 19, 2002, the cities of Lowell, Springfield, Waltham, and Worcester were re-designated to attainment and EPA approved the first maintenance plan for these four city areas (67 FR 7272).

On February 9, 2018, to meet the requirements of Section 175A of the CAA, the Massachusetts Department of Environmental Protection (MassDEP) submitted a revision to its SIP consisting of a second 10-year CO limited maintenance plan (LMP) for the Boston area and for the four city areas. For the Boston area, the initial 10-year maintenance period was from 1996 to 2006, and the second 10-year maintenance period was from 2006 to 2016.¹ For the four city areas, the initial 10-year maintenance period was from 2002 to 2012, and the second 10-year maintenance period is from 2012 to 2022.

II. Revision to the Initial Maintenance Plan for Lowell

On May 13, 2011, EPA published a final rule approving a SIP revision, submitted by MassDEP, which revised the contingency plan portion of the original CO maintenance plan for the city of Lowell (76 FR 27908). This portion of the plan is used to determine when contingency measures need to be triggered to reduce CO concentrations in Lowell. After EPA determined that CO concentrations measured in Lowell had been below the NAAQS for nearly 25 years, EPA's approval action allowed the discontinuation of CO monitoring in the Lowell maintenance area. Massachusetts established an alternative triggering mechanism for Lowell, which relies on CO data from a nearby CO monitor in the city of Worcester to determine when and if monitoring will be reestablished in the Lowell maintenance area, and, in some circumstances, when contingency measures will be triggered in the Lowell maintenance area.

III. The CO Limited Maintenance Plan Option in Massachusetts

¹ The Boston metropolitan area is no longer required to demonstrate transportation conformity for the Boston metropolitan area because the 20-year maintenance period for the Boston metropolitan CO maintenance area expired on April 1, 2016. However, the remainder of the maintenance plan requirements continue to apply, in accordance with the SIP.

EPA issued guidance via a memorandum dated October 6, 1995, on an LMP option for non-classifiable CO nonattainment areas.² This guidance states that to qualify for the LMP option, an area's second highest 8-hour average CO concentration (design value) must be below 85 percent of the NAAQS for the two-year period leading up to re-designation. EPA has determined that the CO LMP option is also available for second 10-year maintenance plans, regardless of the original nonattainment classification.

The Boston area's 1994 CO re-designation request was submitted prior to the availability of the LMP option. However, the 1994 CO re-designation request illustrated that monitored levels of CO were below the "85 percent of the NAAQS" threshold. Massachusetts' monitored CO design values for the Boston metropolitan area have remained well below 85 percent of the NAAQS; therefore, the Boston area is eligible for the LMP option. EPA's evaluation of the four city areas' 2001 CO re-designation request resulted in approval of an LMP. The monitored CO design values continue to be well below 85 percent of the NAAQS for the four city areas, thus the four city areas are also eligible for the LMP option.

EPA believes that it is justifiable and appropriate to apply a reduced set of maintenance plan requirements on areas with data below 85 percent of the NAAQS, thereby allowing areas to implement the LMP option. This includes not requiring the area to forecast future emissions or to develop transportation conformity budgets for use in conformity determinations in future Transportation Improvement Programs. EPA has concluded that emission budgets should not be required in LMP areas because it is unreasonable to assume that these areas will experience so much growth in the remaining portion of a 20-year maintenance period that an exceedance or violation of the CO NAAQS would result.

IV. Conformity Under the Limited Maintenance Plan Option

² Memorandum from Joseph W. Paisie, Group Leader, Integrated Policy and Strategies Group (MD-15), "*Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas*," dated October 6, 1995.

The transportation conformity rule and the general conformity rule (40 CFR parts 51 and 93) apply to nonattainment areas and maintenance areas covered by an approved maintenance plan. Under either conformity rule, an acceptable method of demonstrating a Federal action conforms to the applicable SIP is to demonstrate that expected emissions from the planned action are consistent with the emissions budgets for the area.

While qualification for the CO LMP option does not exempt an area from the need to affirm conformity, conformity may be demonstrated without submitting an emissions budget. Under the LMP option, emissions budgets are treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that the qualifying areas would experience so much growth in that period that a violation of the CO NAAQS would result. For transportation conformity purposes, EPA concludes that emissions in these areas need not be capped for the maintenance period and, therefore, a regional emissions analysis is not required. Similarly, EPA concludes that Federal actions subject to the general conformity rule satisfy the “budget test” specified in 40 CFR 93.158(a)(5)(i)(A) for the same reasons that the budgets are essentially considered to be unlimited.

Under the LMP option, emissions budgets are treated as essentially not constraining for the maintenance period because it is unreasonable to expect that qualifying areas would experience so much growth in that period that a NAAQS violation would result. While areas with maintenance plans approved under the LMP option are not subject to the budget test, the areas remain subject to the other transportation conformity requirements of 40 CFR part 93, subpart A. Thus, the metropolitan planning organization (MPO) in the area or the state must document and ensure that: (1) transportation plans and projects provide for timely implementation of SIP transportation control measures (TCMs) in accordance with 40 CFR 93.113; (2) transportation plans and projects comply with the fiscal constraint element as set forth in 40 CFR 93.108; (3)

the MPO's interagency consultation procedures meet the applicable requirements of 40 CFR 93.105; (4) conformity of transportation plans is determined no less frequently than every four years, and conformity of plan amendments and transportation projects is demonstrated in accordance with the timing requirements specified in 40 CFR 93.104; (5) the latest planning assumptions and emissions model are used as set forth in 40 CFR 93.110 and 40 CFR 93.111; (6) projects do not cause or contribute to any new localized carbon monoxide or particulate matter violations, in accordance with procedures specified in 40 CFR 93.123; and (7) project sponsors and/or operators provide written commitments as specified in 40 CFR 93.125.

In proposing to approve the second 10-year LMP, the four city areas will continue to be exempt from performing a regional emissions analysis, but must meet project-level conformity analyses as well as the transportation conformity criteria mentioned above. The 20-year maintenance period for the Boston area has expired; therefore, the Boston area is no longer required to demonstrate transportation conformity for the Boston metropolitan CO maintenance area.

V. EPA's Evaluation of Massachusetts' SIP Revision

The CO NAAQS is attained when the annual second highest 8-hour average CO concentration (design value) for an area does not exceed a concentration of 9.0 parts per million (ppm). EPA's October 6, 1995, guidance states that to qualify for the LMP option, an area's 8-hour average CO design value at the time of re-designation must be at or below 7.65 ppm (85 percent of the NAAQS) for two consecutive years.

The 1994 CO re-designation request for the Boston area showed that the 8-hour CO design value was 4.8 ppm in 1993. CO monitoring in the years that followed has illustrated that the 8-hour design values have remained well below 7.65 ppm. For example, the highest CO design value for the Boston area in 2014 was 1.1 ppm and in 2015 was 0.9 ppm.

The CO design values in the four city areas have been well below 7.65 ppm since 1997 and in the Boston area have been well below 7.65 ppm since 1985. The highest CO 8-hour design value in 2014 was 1.1 ppm for Worcester, and in 2013 was 1.2 ppm for Springfield. MassDEP's monitoring data illustrates that an exceedance of the 8-hour CO NAAQS has not occurred in the Boston area or the four city areas since 1987. Therefore, as stated earlier in this proposed rulemaking action, the Boston area and the four city areas are eligible for the LMP option.

EPA's October 6, 1995, guidance on LMPs for CO specifies that LMPs should include the following elements: (1) Attainment Inventory; (2) Maintenance Demonstration; (3) Monitoring Network/Verification of Continued Attainment; and (4) Contingency Plan. MassDEP's second 10-year LMP for the Boston area and the four city areas includes these necessary components.

A. Attainment Inventory

The maintenance plan must contain an attainment-year emissions inventory to identify a level of CO emissions that is sufficient to attain the CO NAAQS. MassDEP's February 9, 2018, SIP submittal contains a CO emissions inventory for the Boston area and the four city areas using a base year of 2011.³ This inventory was developed following EPA inventory guidelines, and EPA's National Emissions Inventory (NEI) estimates were adopted for several Stationary Area/Nonpoint source categories including residential wood-burning, open burning, and other fires. For Stationary Point sources such as industrial, electric generation, commercial/institutional, and large residential facilities, annual activity and emissions data is submitted by the facilities to MassDEP's point-source database. On-road mobile-source emissions were calculated using EPA's Motor Vehicle Emissions Simulator (MOVES) model. MassDEP submitted MOVES inputs to EPA's 2011 NEI and MassDEP adopted EPA's MOVES

³ At the time of the February 9, 2018 SIP submittal, the most recent comprehensive periodic emissions inventory (PEI) for CO was the 2011 Base Year Emissions Inventory which can be found at: <https://www.mass.gov/lists/massdep-emissions-inventories> (last visited on April 12, 2019).

annual emissions estimates as reported in the NEI. As a potential exceedance of the CO NAAQS is more likely to occur during winter months when cooler temperatures contribute to incomplete combustion of fuel from motor vehicles, a “typical winter day” format is used for the CO inventory, consistent with EPA’s inventory guidelines. MassDEP adopted the EPA NEI annual CO emission estimates for all off-road mobile source emission categories (including aircraft, rail locomotives, boats, residential lawn/garden equipment, and industrial/commercial construction off-road engines). In the 2011 emissions inventory, on-road mobile sources represent about 59 percent of the typical winter-day CO emissions, followed by 22 percent from nonroad mobile sources, nearly 19 percent from area sources, and under one percent from point sources.

B. Maintenance Demonstration

Consistent with EPA’s October 6, 1995, guidance, which states that meeting the criteria for an LMP (7.65 ppm or lower design value for two consecutive years) also satisfies the requirement for a maintenance plan, MassDEP has provided CO monitoring data illustrating the consistent low levels of CO. MassDEP illustrates that there has not been an exceedance of the 1-hour CO standard of 35 ppm since 1983, and an exceedance of the 8-hour standard has not occurred since 1987. In addition, the 8-hour CO design values have continually been under 2.0 ppm (less than 25 percent of the CO NAAQS) since 2006. The monitored CO levels were below the 85 percent LMP benchmark of 7.65 ppm for the entire period of the initial 10-year maintenance plans and that trend has continued into the second 10-year maintenance periods for all areas in Massachusetts.

C. Monitoring Network/Verification of Continued Attainment

EPA’s October 6, 1995, guidance states “[t]o verify the attainment status of the area over the maintenance period, the maintenance plan should contain provisions for continued operation of an appropriate, EPA approved air quality monitoring network, in accordance with 40 CFR part

58.” MassDEP’s 2017 Air Monitoring Network Plan, the most recent EPA-approved annual air quality monitoring network plan, is included in the docket for this action. Under this plan, MassDEP currently operates a CO monitor at Liberty Street in Springfield, MA (in addition to a handful of other CO monitors across Massachusetts). Due to the low and continually declining level of CO monitored at this site over the past two decades since the last exceedance of the NAAQS, MassDEP requested EPA’s approval for the discontinuation of CO monitoring at the Springfield-Liberty Street site. Since the Springfield CO maintenance plan for the first 10-year period includes a commitment to continue to operate an appropriate air-quality monitoring network during the maintenance period, MassDEP proposes to use the Worcester-Summer Street monitor as a surrogate for Springfield, once the Springfield CO monitoring site is closed. MassDEP’s February 9, 2018, SIP submittal highlights that Worcester has a higher population than Springfield, thus Worcester’s CO concentrations are likely to be higher due to greater motor vehicle emissions, as motor vehicles are significant contributors of CO emissions. The Worcester and Springfield monitors are both located adjacent to high traffic-volume intersections, and MassDEP’s monitoring data illustrates that the Springfield and Worcester monitors have, for many years, recorded similar CO concentrations, well below the NAAQS. For example, in 2014, the highest CO 8-hr design value for Worcester was 1.1 ppm and for Springfield was 0.9 ppm, well below the 9.0 ppm NAAQS and well below 7.65 ppm (the 85% of the NAAQS LMP option criteria). Based on these characteristics, ambient CO concentrations in Worcester are a valid surrogate for CO concentrations in Springfield. MassDEP proposes that, once the Worcester monitor begins to serve as a surrogate, if the second-highest monitored CO concentration in any calendar year in Worcester reaches 75 percent of the 1-hour or 8-hour NAAQS for CO, MassDEP will, within 9 months of the date such concentrations are recorded, re-establish a CO monitoring site in Springfield consistent with EPA siting criteria, and resume

analyzing and reporting CO concentrations in Springfield. Under 40 CFR part 58.14(c), which allows approval of requests to discontinue ambient monitors “on a case-by-case basis if discontinuance does not compromise data collection needed for implementation of a NAAQS and if the requirements of appendix D to 40 CFR part 58 continue to be met,” EPA proposes to find that the proposed (1) closure of the Springfield CO monitoring site, (2) utilization of the Worcester monitor as a surrogate, and (3) proposed criteria for re-instituting the Springfield CO monitor meet the requirements of 40 CFR part 58.14(c).

MassDEP’s Boston CO maintenance plan for the first 10-year period includes a commitment to continue to operate a CO monitoring network in compliance with 40 CFR part 53 that allows for monitors to be shut down with EPA approval. MassDEP stopped monitoring CO at the Kenmore site at the end of January 2015 in accordance with EPA’s approval of the Massachusetts’ 2015 Network Plan⁴ because: (1) MassDEP transitioned the CO monitoring efforts in Boston from Kenmore Square to Von Hillern Street; (2) the CO concentrations measured for Kenmore had been very low in years leading up to the closure; and (3) Boston’s other monitor, Harrison Avenue, will continue to monitor CO for the foreseeable future. In addition, the Von Hillern Street CO monitor is located adjacent to a high traffic-volume interstate highway where concentrations of CO are presumably higher than the Kenmore Square site.

Massachusetts will continue to operate CO monitors in Boston, Worcester, Chicopee, and Lynn in accordance with 40 CFR part 58. Any future modification to this network will require approval from EPA to ensure that the attainment status of the area can be adequately verified.

D. Contingency Plan

⁴ Massachusetts 2015 Air Monitoring Network Plan can be found at <http://www.mass.gov/eea/agencies/massdep/air/reports/annual-ambient-air-quality-monitoring-network-plan.html>.

CAA Section 175A states that a maintenance plan must include contingency provisions, as necessary, to ensure prompt correction of any violation of the relevant NAAQS which may occur after re-designation of the area to attainment. MassDEP's February 9, 2018, SIP submittal makes no changes to the contingency provisions approved as part of the first 10-year maintenance plan for the Boston area (61 FR 2918; January 30, 1996) and for the four city areas (67 FR 7272; February 19, 2002), with the exception of added contingency measures due to the Springfield monitor closure.

Three of the four contingency plan measures included in the first 10-year maintenance plans are being implemented without any triggering event (exceedance of the CO design value). The three measures are: (1) reformulated gasoline; (2) enhanced motor vehicle inspection and maintenance; and (3) California low-emission vehicle program. All three measures are being implemented to meet other requirements of the CAA and have the additional benefit of reducing CO emissions. The fourth measure that will not go into effect unless a triggering event occurs is investigation and potential implementation of local traffic control measures, such as traffic-signal changes and revised parking restrictions, as well as review and adoption of transportation control measures, or other additional vehicle or fuel controls, as needed to reduce monitored concentrations to levels that meet the NAAQS.

In the initial 10-year CO maintenance plan for Springfield, the trigger for implementing the contingency plan is a violation at the Springfield monitor. MassDEP's proposed contingency plan trigger when CO monitoring in Springfield is discontinued will be to use the Worcester and Chicopee CO monitoring data as triggers for implementation of the contingency plan in Springfield. If either the Worcester or Chicopee monitor measures a CO violation, MassDEP will implement contingency measures in Springfield. A violation at the Worcester monitor would also trigger contingency measures in Worcester under the terms of the existing

maintenance plan for Worcester. In the event that MassDEP is required to re-establish a CO monitor in Springfield (which would be triggered by the second-highest CO concentration in any calendar year in Worcester reaching 75 percent of the NAAQS), a violation of the NAAQS at the re-established Springfield monitor would trigger the contingency plan for Springfield.

EPA is proposing to determine that the proposed contingency measure plan for Springfield, in conjunction with the existing contingency measure provisions from the first 10-year maintenance plans, continue to satisfy the contingency plan requirement under CAA section 175A.

VI. Proposed Action

EPA is proposing to approve the second 10-year LMPs submitted by the Commonwealth of Massachusetts on February 9, 2018, for the Boston Metropolitan area and for the cities of Lowell, Springfield, Waltham, and Worcester. We are also proposing to approve the closure of the Springfield, Massachusetts monitor, as well as the revised contingency plan trigger for the Springfield area. EPA is soliciting public comments on the issues discussed in this notice or on other relevant matters. These comments will be considered before taking final action. Interested parties may participate in the Federal rulemaking procedure by submitting written comments to this proposed rule by following the instructions listed in the **ADDRESSES** section of this **Federal Register**.

VII. Statutory and Executive Order Reviews

Under the Clean Air Act, 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, this proposed action

merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- This action is not expected to be an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is 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.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is 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 Clean Air Act; and

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

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: May 9, 2019.

Deborah Szaro,
Acting Regional Administrator,
EPA Region 1.

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