



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R08-OAR-2023-0441; FRL-11837-01-R8]

Air Plan Approval; Colorado; 2017 Base Year Inventory and Emission Statement Rule Marginal Nonattainment Requirements, Revisions to Regulation 3

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve state implementation plan (SIP) revisions submitted by the State of Colorado to meet certain Clean Air Act (CAA) requirements related to the Denver Metro/North Front Range (DMNFR) area's classification as Marginal nonattainment for the 2015 8-hour ozone national ambient air quality standards (NAAQS). The revisions contain a base year emissions inventory for the nonattainment area and certify that the State's existing Air Pollutant Emissions Notice (APEN) program fulfills the CAA's emission statement rule requirement. The revisions also include a new requirement for annual certification of APEN reported emissions. Unrelated to Colorado's Marginal ozone nonattainment obligations, EPA is also proposing to approve the State's revisions to Regulation 3 concerning an update to the date of incorporation by reference of global warming potentials used in the computation of the carbon dioxide equivalent for comparing emissions from various greenhouse gases (GHGs). EPA is taking this action pursuant to the 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-R08-OAR-2023-0441, to the Federal Rulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed

from www.regulations.gov. 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, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically in www.regulations.gov. To reduce the risk of COVID-19 transmission, for this action we do not plan to offer hard copy review of the docket. Please email or call the person listed in the **FOR FURTHER INFORMATION CONTACT** section if you need to make alternative arrangements for access to the docket.

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SUPPLEMENTARY INFORMATION: Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

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I. Background

EPA determined decades ago that ground-level ozone endangers public health and welfare. Ground-level ozone forms when nitrogen oxides (NO_x) and volatile organic compounds (VOC) react in the presence of sunlight. Referred to as ozone precursors, these two pollutants are emitted by many types of pollution sources, including motor vehicles, power plants, industrial facilities, and nonpoint¹ sources. Scientific evidence indicates that adverse human health effects occur following exposure to ozone. These effects are more pronounced in children and adults

¹ Nonpoint sources are also sometimes referred to as area sources.

with lung disease. Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases. In 1979, in response to this scientific evidence, EPA promulgated the first ozone NAAQS, the 0.12 parts per million (ppm) 1-hour ozone NAAQS.²

EPA has strengthened the ozone NAAQS over the years. In 1997, EPA promulgated a revised ozone NAAQS of 0.08 ppm, averaged over eight hours, which it determined was more protective of public health than the 1979 standard.³ In 2008, EPA revised the 8-hour ozone NAAQS from 0.08 to 0.075 ppm.⁴ In 2015, the Agency further strengthened the 8-hour ozone NAAQS to 0.070 ppm.⁵

The DMNFR area is in nonattainment status for both the 2008 and the 2015 ozone NAAQS. It is currently classified as a Severe nonattainment area under the 2008 standard,⁶ which is not at issue in this rulemaking. Effective August 3, 2018, EPA designated the DMNFR area as Marginal nonattainment for the more stringent 2015 ozone NAAQS (2015 DMNFR Nonattainment Area).⁷ The 2015 DMNFR Nonattainment Area includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld counties as well as a portion of Larimer County.⁸ While EPA has since reclassified the 2015 DMNFR Nonattainment Area as Moderate for failing to attain the 2015 ozone NAAQS by the area's Marginal attainment date,⁹ Colorado must still meet the CAA requirements applicable to Marginal ozone nonattainment areas.

This proposed rule addresses only the base year inventory and emission statement rule requirements related to the Marginal nonattainment classification, as described further below,

² 44 FR 8202 (Feb. 8, 1979).

³ 62 FR 38856 (July 18, 1997).

⁴ 73 FR 16436 (Mar. 27, 2008).

⁵ 80 FR 65292 (Oct. 26, 2015).

⁶ 40 CFR 81.306; 87 FR 60926, 60933 (Oct. 7, 2022).

⁷ 83 FR 25776, 25792 (June 4, 2018).

⁸ As detailed in this proposed rule, EPA initially excluded part of Weld County from the 2015 DMNFR Nonattainment Area, but, in response to a court decision, subsequently expanded its air quality designation to include all of Weld County.

⁹ 40 CFR 81.306; 87 FR 60897, 60916 (Oct. 7, 2022).

including SIP revisions to address EPA’s revised designation incorporating all of Weld County into the nonattainment area.¹⁰ Requirements stemming from the DMNFR Nonattainment Area’s Moderate nonattainment classification for the 2015 ozone NAAQS and the Severe classification for the 2008 ozone NAAQS will be addressed in separate EPA rulemakings.

The CAA and its implementing regulations—in particular, the 2015 ozone NAAQS SIP Requirements Rule,¹¹ codified at 40 CFR part 51, subpart CC—establish several requirements for ozone nonattainment areas. Section 172(c)(3) of the CAA, which applies generally to states with areas classified as nonattainment for any NAAQS, requires submission of comprehensive, accurate, and current inventories of actual emissions from all sources of relevant pollutants in Marginal nonattainment areas.¹² Specific to areas classified as Marginal ozone nonattainment, section 182(a)(1) requires states to submit a base year inventory of ozone precursors (NO_x and VOC) within two years of the nonattainment designation.¹³ Section 182(a)(3)(B) directs states to implement an emission statement rule requiring certain stationary sources to report their emissions of NO_x and VOC.¹⁴

Emissions inventories and emission statements provide data that inform a variety of air quality planning tasks. States use emissions inventories to establish baseline emissions levels, calculate emissions reduction targets needed to attain the NAAQS, determine emissions inputs for ozone air quality modeling analyses, and track emissions over time to determine progress toward achieving air quality and emissions reduction goals. EPA has issued guidance to assist states in developing their emission inventories; states retain the discretion to adopt approaches on

¹⁰ See 86 FR 67864, 67869 (Nov. 30, 2021) (noting that states affected by the revised air quality designations would “work with their respective EPA Regional office to submit any necessary supplements or revisions to fulfill the Marginal area SIP revision requirements associated with the nonattainment boundaries in this final action as expeditiously as practicable”).

¹¹ 83 FR 62998 (Dec. 6, 2018). The SIP Requirements Rule established implementation requirements for the 2015 ozone NAAQS, including requirements for base year emissions inventories.

¹² 42 U.S.C. 7502(c)(3).

¹³ 42 U.S.C. 7511a(a)(1); 40 CFR 51.1315(a); 40 CFR 51.1300(p) (defining “base year inventory”).

¹⁴ 42 U.S.C. 7511a(a)(3)(B).

a case-by-case basis that differ from that guidance where appropriate.¹⁵ Emission statements provide important information that states may use to develop emissions inventories for air quality planning, to support permitting efforts, and to assist in demonstrating source compliance.¹⁶

On July 27, 2020, through the Colorado Department of Public Health and Environment (CDPHE), Colorado submitted a SIP revision titled “2015 Ozone National Ambient Air Quality Standard (NAAQS) – Denver Metro/North Front Range Marginal Nonattainment Area Requirements” (2020 SIP Submittal) to satisfy, in part, the emissions inventory requirements under CAA sections 172(c)(3) and 182(a)(1) and the emission statement requirement of CAA section 182(a)(3)(B).¹⁷ Colorado met the CAA’s reasonable notice and public hearing requirements¹⁸ for the 2020 SIP Submittal through notice in the Denver Legal Post on May 23, 2020, and a public hearing on June 18, 2020.¹⁹ However, before EPA proposed action on the 2020 SIP Submittal, the 2015 DMNFR Nonattainment Area boundary, and specifically the partial nonattainment designation of Weld County, was remanded without vacatur in *Clean Wisconsin v. EPA*, 964 F.3d 1145 (D.C. Cir. 2020). EPA then issued a revised designation to include the whole of Weld County in the nonattainment area and noted that states should work with their respective EPA regional office to submit any necessary supplements or revisions to fulfill Marginal area SIP requirements.²⁰

In response, on June 26, 2023, CDPHE submitted a SIP revision titled “Ozone State Implementation Plan (SIP) and Associated Regulations: Regulation Number 3, Regulation Number 7, Regulation Number 21, Common Provisions, and Air Quality Standards,

¹⁵ U.S. EPA, “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” EPA-454/B-17-002 (May 2017), 1 (2017 Emissions Inventory Guidance).

¹⁶ U.S. EPA, “Draft Guidance on the Implementation of an Emission Statement Program” (July 1992), 1.

¹⁷ 2020 SIP Submittal, “01-Submittal Letter to EPA.” The letter is dated July 6, 2020, but the SIP was submitted to EPA on July 27, 2020. The 2020 SIP Submittal was deemed complete by operation of law six months after submission.

¹⁸ 42 U.S.C. 7410(a)(1), (l); 40 CFR 51.102.

¹⁹ 2020 SIP Submittal, “03-Denver Post Legal Ad” and “04-Meeting Agenda.”

²⁰ 86 FR 67864, 67869. The revised designation was affirmed in *Board of County Commissioners of Weld County, Colorado v. EPA*, 72 F.4th 284, 289-92 (D.C. Cir. 2023).

Designations, and Emissions Budgets” (2023 SIP Submittal).²¹ Among other components,²² the 2023 SIP Submittal includes rule revisions to address the outstanding Marginal area SIP requirements for the 2015 DMNFR Nonattainment Area, including an updated base year inventory reflecting EPA’s revised boundary designation of the 2015 DMNFR Nonattainment Area. Colorado met the CAA’s reasonable notice and public hearing requirements through notice in the Denver Legal Post on September 17, 2022, and a public hearing on December 13-16, 2022.²³

Finally, for purposes of administrative efficiency, EPA is proposing to act on Colorado SIP revisions unrelated to the State’s Marginal ozone nonattainment obligations. On March 22, 2021, CDPHE submitted a SIP revision (“2021 SIP Submittal”) that included revisions to Regulation 3, Part A to update the date of incorporation by reference of global warming potentials (GWPs) as defined in 40 CFR part 98, subpart A, table A-1.²⁴ Colorado met the CAA’s reasonable notice and public hearing requirements through notice in the Denver Legal Post on September 26, 2020, and a public hearing on December 16-18, 2020.²⁵ Although EPA approved other elements of the 2021 SIP Submittal in a March 27, 2023 final rule, we did not finalize action on the revisions updating the date of incorporation by reference of GWPs for the reasons discussed in that final rule²⁶ and below. In addition, Colorado’s 2023 SIP Submittal included revisions to Regulation 3 related to the incorporation by reference of GWPs that build upon the aforementioned 2021 SIP Submittal revisions. We now propose to act concurrently on the Regulation 3 GWP revisions from both the 2021 SIP Submittal and subsequent 2023 SIP Submittal.

²¹ 2023 SIP Submittal, Document Set 1 of 7, “00_Submittal Letter to EPA_Ozone SIP.” The letter is dated June 22, 2023, but the SIP was submitted to EPA on June 26, 2023. EPA determined the 2023 SIP Submittal to be complete on September 7, 2023.

²² The 2023 SIP Submittal includes elements of Colorado’s 2008 Severe Ozone SIP and its 2015 Moderate Ozone SIP. EPA will take action on those SIP components in a separate rulemaking.

²³ 2023 SIP Submittal, Document Set 1 of 7, “05_Denver Post Legal Ad” and “06_Meeting Agenda.”

²⁴ 2021 SIP Submittal, Document Set 1 of 6, “01_Submittal Letter to EPA – 121820_Ozone SIP, Reg 3, Reg 7, Air Quality Stds_signed”; “03_Hearing Notice & Proposed Language_R3.” The 2021 SIP Submittal was deemed complete by operation of law six months after submission.

²⁵ 2021 SIP Submittal, Document Set 1 of 6, “05_Denver Post Legal Ad” and “06_Meeting Agenda.”

²⁶ 88 FR 18054, 18054 (Mar. 27, 2023).

II. The EPA's Evaluation of Colorado's SIP Submittals

A. Base Year Emissions Inventory

Under CAA sections 172(c)(3) and 182(a)(1), Colorado must submit a comprehensive, accurate, and current accounting of actual emissions of ozone precursors from all sources (point, nonpoint, nonroad mobile, and on-road mobile sources) in the 2015 DMNFR Nonattainment Area. EPA's SIP Requirements Rule specifies that the inventory year shall be selected consistent with the baseline year for the Reasonable Further Progress (RFP) plan under 40 CFR 51.1310(b),²⁷ which EPA identified as 2017.²⁸ The rule also requires states to report "ozone season day emissions" in the base year inventory,²⁹ as described in other EPA regulations:

Ozone season day emissions means an average day's emissions for a typical ozone season work weekday. The state shall select, subject to EPA approval, the particular month(s) in the ozone season and the day(s) in the work week to be represented, considering the conditions assumed in the development of RFP plans and/or emissions budgets for transportation conformity.³⁰

Based on EPA's 2017 Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations (2017 Emissions Inventory Guidance), the selected ozone season day should be representative of the conditions leading to nonattainment.³¹

To satisfy these requirements, Colorado included a 2017 base year inventory in its 2020 SIP Submittal.³² Following EPA's revised designation of the 2015 DMNFR Nonattainment Area, Colorado then submitted a revised base year inventory in its 2023 SIP Submittal as a superseding supplement to its 2020 SIP Submittal to account for emissions from the revised nonattainment area, including the whole of Weld County.³³ Consistent with the SIP Requirements Rule, the

²⁷ 40 CFR 51.1315(a).

²⁸ 83 FR 62998, 63005.

²⁹ 40 CFR 51.1315(c).

³⁰ 40 CFR 51.1300(q).

³¹ 2017 Emissions Inventory Guidance, 75.

³² 2020 SIP Submittal, "08-Denver 2017 Ozone NAA Inventory."

³³ 2023 SIP Submittal, Document Set 6 of 7, "2017 Baseline Inventory Update TSD FINAL," 1-2 ("2017 Baseline Inventory Update TSD"); 2023 SIP Submittal, Document Set 6 of 7, "APCD_FINAL_SIP-2015," ch. 3 ("Revised Milestone Emission Inventory").

revised inventory uses 2017 as the base year for SIP planning purposes.³⁴ It was developed for a typical July day in 2017 to estimate NO_x and VOC emissions during the peak summer ozone season, which is representative of the conditions leading to nonattainment in the 2015 DMNFR Nonattainment Area.³⁵ Consistent with the 2017 Emissions Inventory Guidance, the inventory estimates emissions from all major source categories including point sources, nonpoint sources, on-road and nonroad mobile sources, and biogenic sources.³⁶ Additional information describing Colorado’s general methodology for compiling its emissions inventory may be found in the State’s inventory technical support document included in the 2023 SIP Submittal.³⁷

Tables 1 and 2 of this proposed rule show 2017 ozone season day emissions for the 2015 DMNFR Nonattainment Area in units of tons per day (tpd). Table 1 summarizes anthropogenic VOC and NO_x emissions by source sector. Table 2 summarizes biogenic VOC and NO_x emissions, including those from fire and other naturally occurring emissions not included as anthropogenic emissions in Table 1. The anthropogenic portion of the base year inventory for a nonattainment area may serve as the Rate of Progress (ROP)/RFP baseline inventory for Moderate and higher nonattainment classifications.³⁸ The following sections II.A.1-II.A.6 describe the State’s inventory of emissions from the various source sectors in more detail.

TABLE 1—DENVER METRO/NORTH FRONT RANGE NONATTAINMENT AREA 2017 VOC AND NO_x BASE YEAR ANTHROPOGENIC EMISSIONS INVENTORY [Tons/Day]³⁹

| Source Type | NO _x | VOC |
|----------------------|-----------------|-------|
| Point | 24.2 | 21.9 |
| Nonpoint | 0.1 | 80.1 |
| On-road Mobile | 57.4 | 48.1 |
| Nonroad Mobile | 42.9 | 44.5 |
| Oil & Gas | 78.2 | 211.1 |
| Total | 202.9 | 405.7 |

³⁴ 83 FR 62998, 63005, 63011 n.29.

³⁵ 2017 Baseline Inventory Update TSD, 2.

³⁶ Id.; Revised Milestone Emission Inventory, ch. 3; 2017 Emissions Inventory Guidance, 19, 81.

³⁷ 2017 Baseline Inventory Update TSD, 1-14.

³⁸ 2017 Emissions Inventory Guidance, 41.

³⁹ Revised Milestone Emission Inventory, 3.2.2.1, tbl. 7.

TABLE 2— DENVER METRO/NORTH FRONT RANGE NONATTAINMENT AREA 2017 VOC AND NO_x BASE YEAR BIOGENIC EMISSIONS [Tons/Day]⁴⁰

| Source Type | NO _x | VOC |
|----------------|-----------------|-------|
| Biogenic | 26.5 | 419.0 |

1. Point Source Emissions

Point sources are large, stationary, identifiable sources of emissions that release pollutants into the atmosphere. In its 2017 base year inventory, the State included point source emissions from source categories including power plants/electric generating units, external combustion boilers, industrial processes, internal combustion sources, petroleum/solvent evaporation not associated with the oil and gas industry, and waste disposal.⁴¹ The SIP Requirements Rule provides that emissions from point sources shall be reported according to the thresholds of EPA’s Air Emissions Reporting Requirements (AERR).⁴² The 2017 Emissions Inventory Guidance directs those preparing point source inventories to volume 2 of the Emissions Inventory Improvement Program technical report series for information on point source inventory methodology.⁴³ This resource describes the three principal methods for estimating point source emissions as source testing, mass balance calculations, and emission factors, with a fourth method utilizing engineering calculations if the principal methods are not possible.⁴⁴

Colorado obtained its point source data from the APEN database, the State’s emissions reporting system for stationary sources.⁴⁵ Colorado requires an APEN to be filed for emission points in a nonattainment area with uncontrolled actual emissions of one ton per year or more of

⁴⁰ Id. at 3.2.2.7, tbl. 15.

⁴¹ Colorado’s methodology and results for the point source category are described in section 3.2.2.3 of the Revised Milestone Emission Inventory.

⁴² 40 CFR 51.1315(d).

⁴³ 2017 Emissions Inventory Guidance, 81-82.

⁴⁴ U.S. EPA, EIIP Technical Report Series Vol. II, Ch. 1: “Introduction to Stationary Point Source Emission Inventory Development” (May 2001), 1.4-1–1.4-3.

⁴⁵ Revised Milestone Emission Inventory, 3.2.2.3.

any criteria pollutant that the area is designated nonattainment for.⁴⁶ In order of preferred methodology, APEN emission estimates are based on actual test data or, in the absence of such data, on mass balance calculations, published emission factors, or engineering calculations.⁴⁷ Since Colorado's base year inventory is consistent with the reporting thresholds in the AERR and uses methods for estimating emissions recommended by EPA guidance, the base year inventory adequately addresses emissions from the point source category.

2. Nonpoint Source Emissions

Nonpoint sources are sources of pollution that are small and numerous and that have not been inventoried as specific point sources or mobile sources. They include a wide range of categories such as coatings, household and personal care products, pesticides, automotive aftermarket products, and sealants. Inventorying nonpoint sources involves grouping them by category and estimating their emissions collectively using one methodology.

The State developed the nonpoint source emissions inventory⁴⁸ from the 2016v2 EPA modeling platform,⁴⁹ which includes emission inventories for 2016 and 2023. To establish emissions for 2017 from the 2016v2 platform, the State used a linear interpolation from 2016 to 2023. Because a portion of Larimer County is not part of the 2015 DMNFR Nonattainment Area, the State scaled the whole-county emissions by the ratio of the county population residing within the nonattainment area boundary based on 2020 census block data—0.9776—to determine an accurate emissions contribution for the relevant part of Larimer County. The nonpoint source portion of Colorado's emissions inventory includes source categories addressed in the nonpoint portion of the inventories developed for EPA's 2016v2 platform. Colorado used EPA estimates

⁴⁶ 5 CCR 1001-5:3A.II.B.3.a.

⁴⁷ 5 CCR 1001-5:3A.II.B.1.

⁴⁸ Colorado's methodology and results for the nonpoint source category are described in section 3.2.2.4 of the Revised Milestone Emission Inventory.

⁴⁹ The 2016v2 modeling platform includes a set of emissions inventories, data files, software tools, and scripts used for air quality modeling. Files and technical support documents are available at: <https://www.epa.gov/air-emissions-modeling/2016v2-platform>. The 2016v2 modeling platform draws on data from the 2017 National Emissions Inventory and includes point sources, nonpoint sources, commercial marine vessels, on-road and nonroad mobile sources, and fires for the U.S., Canada, and Mexico. U.S. EPA, "Technical Support Document (TSD): Preparation of Emissions Inventories for the 2016v2 North American Emissions Modeling Platform," EPA-454/B-22-001 (Feb. 2022), 1-2.

for the nonpoint source category and apportioned partial county emissions using methods consistent with the 2017 Emissions Inventory Guidance.⁵⁰ Therefore, the base year inventory adequately addresses emissions from the nonpoint source category.

3. On-road Mobile Source Emissions

For on-road mobile sources (vehicles operated on public roadways), Colorado's 2017 base year inventory includes emissions from passenger cars, motorcycles, light trucks, refuse/single-unit trucks, short/long-haul trucks, and buses.⁵¹ The State estimated these emissions using EPA's Motor Vehicle Emissions Simulator model version 3 (MOVES3⁵²) along with link-level (roadway) vehicle miles traveled (VMT) provided by the two metropolitan planning organizations that serve the 2015 DMNFR Nonattainment Area, the Denver Regional Council of Governments and the North Front Range Metropolitan Planning Organization. The State based VMT on travel demand model output data from those two organizations and apportioned it to the nonattainment area at the roadway level using Geographic Information Systems. Additional MOVES3 model inputs include vehicle population and age distribution, roadway activity data (speed and time of day), roadway classifications (urban, rural, restricted, unrestricted), fuel properties, inspection and maintenance program characteristics, and hourly meteorology. These model inputs are described in greater detail in EPA's MOVES3 technical guidance.⁵³ Specific MOVES3 on-road inputs used by the State are identified in Appendix A to the 2017 Baseline Inventory Update Technical Support Document. The State based model inputs on conditions on an average July weekday and used the MOVES3 default fuel formulation. It calculated NO_x and VOC emission factors from MOVES3 for each vehicle type and then multiplied these emission factors by the roadway-level VMT to establish on-road mobile source emissions.

⁵⁰ 2017 Emissions Inventory Guidance, 72-73, 131-32.

⁵¹ Colorado's methodology and results for the on-road mobile source category are described in section 3.2.2.6 of the Revised Milestone Emission Inventory and in section 3.1.1 and Appendix A of the 2017 Baseline Inventory Update TSD.

⁵² MOVES3 files and technical support documents are available at: <https://www.epa.gov/moves/moves-versions-limited-current-use>.

⁵³ U.S. EPA, "MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity," EPA-420-B-20-052 (Nov. 2020), 26-58.

Colorado's on-road mobile source emissions inventory methodology follows the SIP Requirements Rule, which states that "the latest approved version of the [MOVES] model should be used to estimate emissions from on-road and certain nonroad transportation sources."⁵⁴ MOVES3 was the latest approved version of the model available at the time that the State developed its 2017 base year inventory. Colorado used local data on vehicle/roadway activity, meteorological conditions, fuel use, and other information characterizing the DMNFR area in 2017, as called for by EPA's 2017 Emissions Inventory Guidance.⁵⁵ Therefore, the base year inventory adequately addresses emissions from the on-road mobile source category.

4. Nonroad Mobile Source Emissions

Nonroad mobile sources are mobile sources other than on-road vehicles, including engines used in lawn and garden equipment, commercial and industrial equipment, construction and mining equipment, aircraft, and locomotives. Colorado's 2017 base year inventory used EPA's MOVES-Nonroad model to estimate emissions from nonroad mobile sources in the 2015 DMNFR Nonattainment Area, except for emissions from aviation, locomotives, and rail yards.⁵⁶ MOVES-Nonroad exists as a separate module from the on-road modeling capabilities within MOVES3. The specific MOVES3 nonroad inputs used by the State are identified in Appendix A to the 2017 Baseline Inventory Technical Support Document.

The State estimated aviation emissions based on data provided by Denver International Airport (DIA) on fleet composition and activity level, including estimates of emissions from aircraft and ground support equipment such as auxiliary power units. It estimated 2017 aviation emissions from other airports within the nonattainment area using a linear interpolation between the 2016 and 2023 point source emissions from the 2016v2 EPA modeling platform, with DIA emissions excluded. The State also used the 2016v2 modeling platform to estimate emissions

⁵⁴ 83 FR 62998, 63022.

⁵⁵ 2017 Emissions Inventory Guidance, 89-90.

⁵⁶ Colorado's methodology and results for the nonroad mobile source category are described in section 3.2.2.5 of the Revised Milestone Emission Inventory and in section 3.1.2 and Appendix A of the 2017 Baseline Inventory Update TSD.

from railroad locomotives and rail yard switcher locomotives. It apportioned line-haul locomotive activity levels by track mileage in the nonattainment area. As with the aviation and nonpoint source sectors, Colorado determined 2017 locomotive emissions from a linear trend between 2016 and 2023 estimates from the 2016v2 platform.

As directed in the SIP Requirements Rule,⁵⁷ Colorado used the most recently available version of EPA's MOVES-Nonroad model to estimate emissions from certain nonroad sources. Furthermore, Colorado used EPA's own 2016v2 platform to account for emissions from aviation, locomotives, and rail yards not covered by the MOVES-Nonroad model. Finally, for emissions specifically from DIA, the major international airport in the DMNFR nonattainment area, the State relied on data provided from the airport that provides valuable detail regarding DIA emissions. Therefore, the base year inventory adequately addresses emissions from the non-road mobile source category.

5. Oil and Gas Emissions

To inventory oil and gas emissions for its 2023 SIP Submittal, Colorado relied on extensive industry outreach it had conducted between 2015-2018 to develop emission inventories for its 2008 8-hour Ozone DMNFR Nonattainment Area Moderate and Serious SIPs.⁵⁸ The State based its approach to the oil and gas emissions component of its inventory on actual and survey data from operators in the specific geological basin.

Colorado's 2017 base year emissions inventory categorizes emissions from the oil and gas sector into point sources, condensate/oil tanks, and nonpoint sources. The State used APEN reported data to determine emissions from point sources, including external combustion boilers, industrial processes, internal combustion sources, petroleum/solvent evaporation, and waste disposal. As described previously, Colorado's APEN reporting program meets the point source thresholds in EPA's AERR and uses methods for estimating emissions consistent with that

⁵⁷ 83 FR 62998, 63022.

⁵⁸ Colorado's methodology and results for the oil and gas source category are described in section 3.2.2.2 of the Revised Milestone Emission Inventory and in sections 3.2 and 3.3 of the 2017 Baseline Inventory Update TSD.

recommended by EPA guidance. Therefore, the base year inventory adequately addresses the point source component of oil and gas emissions.

Colorado based condensate tank emissions (the largest single source of VOC emissions in the 2017 base year inventory) on APEN reported data, data collected by the Colorado Energy and Carbon Management Commission, and data reported directly by the industry. The State developed site-specific uncontrolled tank emission factors and multiplied them by facilities' production in barrels per year. It then adjusted the resulting emissions to account for several factors relevant to condensate tanks: a control device's destruction and removal efficiency (DRE) of emissions; the capture efficiency of a control device (a fractional factor intended to discount a control device's DRE to account for actual operating conditions and potential process/device upsets); and the rule effectiveness of regulations (a discount factor that scales a control device's DRE downward to account for a degree of noncompliance with applicable regulations). Since Colorado estimated condensate tank emissions using APEN reported data as well as additional industry-specific data and site-specific emission factors, the base year inventory adequately addresses emissions from the condensate tank portion of the oil and gas component.

Oil and gas nonpoint sources in Colorado's inventory include emissions from certain production equipment and operations (e.g., emissions from well pad engines, truck loading, pneumatic devices, fugitives, blowdowns, process heaters, separator control, and water tank losses). Nonpoint source emissions also result from pre-production operations, including from drill rig engines, hydraulic fracturing engines, drilling mud degassing, and venting during completion operations. The State estimated some of these emissions based on facility/equipment level data reported by 11 producers as part of the stakeholder group it convened in 2018, with emissions scaled to account for the entirety of the 2015 DMNFR Nonattainment Area including the whole of Weld County. Colorado used 2017 NEI data to supplement pre-production emissions for categories not included in producer-submitted data. The State determined drilling mud degassing emissions that were not captured in producer-submitted information, or the 2017

NEI, from EPA's 2016v2 modeling platform by interpolating emissions to 2017 from 2016 and 2023 emissions. Since Colorado relied on basin-specific producer submitted information in developing its oil and gas nonpoint source inventory, in addition to emissions from EPA's own 2017 NEI and 2016v2 platform, the base year inventory adequately addresses emissions from the oil and gas nonpoint source component.

6. Biogenic Emissions

Biogenic emissions come from natural sources. Colorado included a 2017 inventory of biogenic emissions separate from the anthropogenic portion of the inventory.⁵⁹ The State used EPA's Biogenic Emissions Inventory System (BEIS), version 3, which EPA developed specifically for estimating biogenic emissions for inventories.⁶⁰ Since Colorado used the BEIS model to estimate emissions, as recommended by EPA guidance, the base year inventory adequately addresses emission from the biogenic source category.

7. EPA's Evaluation of the Base Year Emissions Inventory

Based on EPA's review and evaluation of the methodologies, procedures, and results in Colorado's 2017 base year emissions inventory, we propose to find that the inventory meets the requirements of CAA sections 172(c)(3) and 182(a)(1) and the SIP Requirements Rule. The base year inventory is based on the most current and accurate information that was available to the State at the time the inventory was developed. Additionally, the 2017 inventory comprehensively addresses all source categories in the 2015 DMNFR Nonattainment Area including the whole of Weld County and was developed consistent with the relevant EPA emissions inventory regulations, guidance, and models.

B. Certification of Existing Emission Statement Rule and Addition of Annual Certification Requirement

⁵⁹ Colorado's methodology and results for the biogenic source category are described in section 3.2.2.7 of the Revised Milestone Emission Inventory.

⁶⁰ 2017 Emissions Inventory Guidance, 101-102.

Under CAA section 182(a)(3)(B), Colorado must implement an emission statement rule requiring certain stationary sources that emit VOC or NO_x in the nonattainment area to report on their emissions at least annually.⁶¹ Section 182(a)(3)(B)(ii) specifies that a state may waive this requirement for sources that emit less than 25 tpy of VOC or NO_x if the state includes emissions from such sources in its base year or periodic inventories.⁶² If a state already has an EPA-approved emissions reporting regulation in place and determines that it is adequate to meet the requirements of section 182(a)(3)(B), EPA may accept a SIP revision with the state's written certification of that determination in lieu of the state submitting new revised regulations.⁶³ In its 2020 SIP Submittal, Colorado certified that its existing SIP-approved APEN program meets the source reporting requirements for an emission statement rule under CAA section 182(a)(3)(B).⁶⁴

Colorado's APEN program requires stationary sources with uncontrolled actual emissions of one tpy or more of any individual criteria pollutant for which the area is in nonattainment to file an APEN with the Colorado Air Pollution Control Division (APCD).⁶⁵ Emission estimates reported on the APEN must be based on actual test data or, in the absence of such data, on an alternative estimation acceptable to the APCD.⁶⁶ Each APEN must include the location of the source; the operator's name and address; the nature of the facility, process or activity; an estimate of the quantity and composition of emissions; and other specified information that varies based on the type of source.⁶⁷ An APEN is valid for five years⁶⁸ but must be revised (1) annually whenever a significant change in annual actual emissions occurs or (2) upon the occurrence of a triggering event, such as a change in the owner/operator, the installation of new control equipment, or the modification of a permit limitation.⁶⁹ To ensure the accuracy of

⁶¹ 42 U.S.C. 7511a(a)(3)(B)(i).

⁶² 42 U.S.C. 7511a(a)(3)(B)(ii).

⁶³ 83 FR 62998, 63001-02.

⁶⁴ Collectively, the information contained in "01-Submittal Letter to EPA," "06-Issue Statement," and "07-CAA Elements Table" in the 2020 SIP Submittal satisfies the certification requirements outlined in the SIP Requirements Rule, 83 FR 62998, 63001-02.

⁶⁵ 5 CCR 1001-5:3A.II.A.1, II.B.3.a.

⁶⁶ 5 CCR 1001-5:3A.II.B.1.

⁶⁷ 5 CCR 1001-5:3A.II.A.1.

⁶⁸ 5 CCR 1001-5:3A.II.B.2.

⁶⁹ 5 CCR 1001-5:3A.II.C.

APEN reported emissions between triggering events, Colorado's 2023 SIP Submittal includes revisions to add section II.A.3 to Regulation 3, Part A.⁷⁰ The new section II.A.3 requires stationary sources in the ozone nonattainment area with the potential to emit 25 tpy or more of NO_x or VOC to annually certify through an APCD-approved format that annual actual emissions are as reported on the source's APEN.

EPA is proposing to concurrently approve Colorado's certification of its APEN program in its 2020 SIP Submittal, as well as the State's associated addition of the annual certification provision in section II.A.3 to Regulation 3, Part A in its 2023 SIP Submittal, as meeting the requirements for an emission statement rule under CAA section 182(a)(3)(B). As recommended by EPA guidance, the APEN program requires certification of data accuracy and submission of source identification information, operating schedule, emissions information, control equipment information, and process data.⁷¹ Since Colorado's 2017 base year inventory, as described previously in this proposed rule, includes emissions from sources below 25 tpy and is based on acceptable methodologies, Colorado's APEN reporting program satisfies the criteria for the waiver in CAA section 182(a)(3)(B)(ii). Therefore, EPA proposes to approve the State's APEN reporting program under CAA section 182(a)(3)(B).

C. Other Revisions to Regulation 3, Part A

EPA is also proposing action on certain other revisions to Regulation 3 unrelated to the State's Marginal ozone nonattainment obligations. Colorado's 2021 and 2023 SIP Submittals included several revisions to Regulation 3, Parts A, B, and D. In this rulemaking, we are proposing action on the State's revisions to Regulation 3, Part A related to the date of incorporation by reference of global warming potentials (GWPs) and the computation of the mass of carbon dioxide equivalent.⁷² The revisions in the 2021 and 2023 SIP Submittals that are

⁷⁰ 2023 SIP Submittal, Document Set 5 of 7, "17_Reg Lang & SBAP Adopted_R3."

⁷¹ U.S. EPA, "Draft Guidance on the Implementation of an Emission Statement Program" (July 1992), 3.

⁷² References to specific sections of Regulation 3 in sections II.C.1 and II.C.2 of this proposed rule are to the versions of Regulation 3 the State included in the 2021 and 2023 SIP Submittals, namely: 2021 SIP Submittal, Document Set 4 of 6, "16_Reg Lang & SBAP Adopted_R3"; 2021 SIP Submittal, Document Set 6 of 6, "22_5 CCR

described below have State effective dates of February 14, 2021, and February 14, 2023, respectively. The revisions do not interfere with attainment or maintenance of any of the NAAQS and would not interfere with any other applicable requirement of the CAA, and are therefore approvable under CAA section 110(l). EPA will propose action on the remaining revisions to Regulation 3, Parts A, B, and D in a separate rulemaking.

1. Regulation 3, Part A, Sections I.B.10 and 1.B.44.b.(i) – Date of Incorporation by Reference of Global Warming Potentials

Colorado’s Regulation 3, Part A, Section I.B.10 defines “carbon dioxide equivalent” as a metric used to compare emissions of various greenhouse gases. The metric is based in part on each gas’s GWP as codified in 40 CFR part 98, subpart A, table A-1, which Regulation 3 incorporates by reference. Regulation 3, Part A, Section I.B.44.b.(i), which provides conditions under which GHGs are “subject to regulation,” makes the same incorporation by reference. In its 2021 SIP Submittal, the State replaced the outdated November 20, 2013 incorporation by reference date with December 11, 2014 in both Sections 1.B.10 and 1.B.44.b.(i).⁷³ However, while the November 20, 2013 date was removed from Section 1.B.10 in the Code of Colorado Regulations, the revised date was inadvertently omitted, leaving the incorporation by reference without a corresponding date.⁷⁴ Colorado’s 2023 SIP Submittal corrects that omission.⁷⁵ Since December 11, 2014, is the most recent date of revision to the GWPs in 40 CFR Part 98, Subpart A, Table A-1, EPA is proposing to approve the revisions from the 2021 and 2023 SIP Submittals that update the date of incorporation by reference in Regulation 3, Part A, sections I.B.10 and 1.B.44.b.(i).

2. Regulation 3, Part A, Section I.B.44.(b).(i) – Computation of Mass of Carbon Dioxide Equivalent

1001-5”; 2023 SIP Submittal, Document Set 5 of 7, “17_Reg Lang & SBAP Adopted_R3”; and 2023 SIP Submittal, Document Set 7 of 7, “23_5 CCR 1001-5.”

⁷³ 2021 SIP Submittal, Document Set 4 of 6, “16_Reg Lang & SBAP Adopted_R3.”

⁷⁴ 2021 SIP Submittal, Document Set 6 of 6, “22_5 CCR 1001-5,” 4.

⁷⁵ 2023 SIP Submittal, Document Set 5 of 7, “17_Reg Lang & SBAP Adopted_R3.”

EPA is proposing to approve an additional revision in Colorado’s 2023 SIP Submittal to Regulation 3, Part A, Section I.B.44.b.(i).⁷⁶ The revision removes language stating that, prior to July 21, 2014, the mass of carbon dioxide shall not include emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material. The removed language is consistent with the definition of “subject to regulation” at 40 CFR 70.2, which instructed how to compute the mass of carbon dioxide equivalent before July 21, 2014. This language was meant to defer the application of Prevention of Significant Deterioration and Title V programs to certain sources of biogenic carbon dioxide for three years.⁷⁷ Because the deferral period has since expired, continued inclusion of this language in the SIP is unnecessary.

III. Proposed Action

We are proposing to approve elements of Colorado’s July 27, 2020, March 22, 2021, and June 26, 2023 SIP Submittals. Specifically, we are proposing to approve Colorado’s 2017 base year inventory under CAA sections 172(c)(3) and 182(a)(1). We are proposing to approve Colorado’s certification of its APEN reporting program (July 27, 2020 SIP Submittal) and the addition of the annual certification requirement in Section II.A.3 to Regulation 3, Part A (June 26, 2023 SIP Submittal) as meeting the emission statement rule requirements of CAA section 182(a)(3)(B). We are also proposing to approve certain revisions to Regulation 3, Part A, specifically to the date of incorporation by reference of GWPs in Sections 1.B.10 and 1.B.44.b.(i) (March 22, 2021 and June 26, 2023 SIP Submittals) and to the computation of the mass of carbon dioxide equivalent in Section 1.B.44.b.(i) (June 26, 2023 SIP Submittal).

IV. Incorporation by Reference

In this document, the EPA is proposing to include regulatory text in an EPA final rule that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference the APCD revisions regarding annual APEN

⁷⁶ Id.

⁷⁷ 76 FR 43490, 43490 (July 20, 2011).

certification, updated incorporation by reference dates of CFR global warming potentials, and revisions related to the computation of carbon dioxide equivalent, as described in sections II.B and II.C of this proposed rule. The EPA has made, and will continue to make, these materials generally available through www.regulations.gov and at the EPA Region 8 Office. Please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information.

V. Statutory and Executive Order Reviews

Under the CAA, 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, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this 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);
- 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 CAA; and

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 proposed 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).

Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, Feb. 16, 1994) directs Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. EPA defines environmental justice (EJ) as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” EPA further defines the term fair treatment to mean that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.”

Colorado did not evaluate environmental justice considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA did not perform an EJ analysis and did not consider EJ in this action.

Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of Executive Order 12898 of achieving environmental justice for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

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

Authority: 42 U.S.C. 7401 *et seq.*

Dated: April 2, 2024

KC Becker,
Regional Administrator,
Region 8.

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