

Appendix H

RFP, Quantitative Milestones, and Contingency



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H. RFP, QUANTITATIVE MILESTONES, AND CONTINGENCY

Pursuant to federal Clean Air Act (CAA) requirements, states are required to submit a state implementation plan (SIP) to EPA for areas designated nonattainment of National Ambient Air Quality Standards (NAAQS, or standards) for PM_{2.5}.¹ This appendix fulfills the following federal Clean Air Act requirements for PM_{2.5} nonattainment areas as identified in the CAA, codified in the code of federal regulations,² and clarified in the 2016 PM_{2.5} Implementation Rule:³

1. Reasonable Further Progress [CAA §172(c)(2)]
2. Quantitative Milestones [CAA §189(c)]
3. Contingency [CAA §172(c)(9)]

For standard-specific demonstrations of federal requirements refer to the following plan chapters:

- 1997 PM_{2.5} Standard Demonstration – Chapter 5
- 2006 PM_{2.5} Standard Demonstration – Chapter 6
- 2012 PM_{2.5} Standard Demonstration – Chapter 7

H.1 REASONABLE FURTHER PROGRESS (RFP)

The term “reasonable further progress” means such annual incremental reductions in emissions of the relevant air pollutant as are required for the purpose of ensuring attainment of the applicable NAAQS by the applicable date.⁴ Each attainment plan for a PM_{2.5} nonattainment area shall include an RFP plan that demonstrates that sources in the area will achieve such annual incremental reductions in emissions of PM_{2.5} and PM_{2.5} plan precursors as are necessary to ensure attainment of the applicable PM_{2.5} NAAQS as expeditiously as practicable. In the case of the San Joaquin Valley, air quality modeling has demonstrated NO_x is the significant precursor to PM_{2.5} (see Appendix G).

Regardless of whether a state is submitting a Moderate area plan, a Serious area plan, or a plan required pursuant to CAA §189(d) (5% Plans), to satisfy the statutory requirements for RFP at CAA §172(c)(2), a state must submit an RFP plan.

Linear emission reductions

Historically, EPA’s interpretation of the RFP requirement has been “generally linear progress” from the base year to the attainment year, demonstrated at RFP milestone years.⁵

¹ Clean Air Act, Title 1, Part D Subpart 1 and CAA Title 1, Part D Subpart 4

² CFR part 51 – Requirements for preparation, adoption, and submittal of implementation Plans

³ Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements; Final Rule. 81 Fed. Reg. 164, pp. 58010-58162. (2016, August 24). (to be codified at 40 CFR Parts 50, 51, and 93). <https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf>

⁴ Clean Air Act Section 171(1)

⁵ 72 FR 20633, codified at 40 CFR 51 Subpart Z § 51.1000 (definitions)

Stepwise emission reductions

In its most recent Implementation Rule, EPA clarified that RFP requirements may be satisfied through generally linear progress, or through a stepwise demonstration. Stepwise emissions reductions would be slower than “generally linear” reductions for certain periods, and then would decline sharply (due to implementation of a new emission reduction program, or new operation of control technology on one or more stationary sources).

For example, in one area new emission standards for mobile sources may achieve reductions in a generally linear manner over time, as a portion of the existing vehicle fleet is replaced each year with new vehicles meeting the more stringent standards. In another area, regulations to reduce emissions from certain stationary source sectors could have a single compliance date by which controls must be in place, which could result in a significant drop in emissions in a “stepwise” manner over a relatively short period. In the first case, the EPA expects that, so long as the attainment date is as expeditious as practicable, then generally linear progress toward attainment by that date would satisfy the RFP requirement. In the second case, where progress is slower than generally linear, the state is required to submit a clear rationale and supporting information to explain why generally linear progress is not appropriate (e.g., due to the nature of the nonattainment problem, the types of sources contributing to PM_{2.5} levels in the area and the implementation schedule for control requirements at such sources).

H.1.1 RFP PLAN REQUIREMENTS

Each attainment plan for a PM_{2.5} nonattainment area shall include an RFP plan that demonstrates that sources in the area will achieve such annual incremental reductions in emissions of direct PM_{2.5} and PM_{2.5} plan precursors as are necessary to ensure attainment of the applicable PM_{2.5} NAAQS as expeditiously as practicable.⁶

The RFP plan shall include the following:⁷

1. A schedule describing the implementation of control measures during each year of the applicable attainment Plan.
2. RFP projected emissions for direct PM_{2.5} and NO_x for each applicable milestone year, based on the anticipated implementation schedule for control measures.
3. An analysis that presents the schedule of control measures and estimated emissions changes to be achieved by each milestone year, and that demonstrates that the control strategy will achieve RFP toward attainment between the base year and the attainment year. The analysis shall rely on information from the base year inventory and the attainment projected inventory for the nonattainment area, in addition to the RFP projected emissions required.
4. An analysis that demonstrates that by the end of the calendar year for each milestone date for the area, pollutant emissions will be at levels that reflect either generally linear progress or stepwise progress in reducing emissions on an annual basis between the base year and the attainment year. A demonstration

⁶ 40 CFR §51.1012 Reasonable further progress requirements.

⁷ 40 CFR § 51.1012

of stepwise progress must be accompanied by appropriate justification for the selected implementation schedule.

5. At the state's election, an analysis that identifies air quality targets associated with the RFP projected emissions identified for the milestone years at the design value monitor locations.

H.1.2 DETERMINATION OF RFP YEARS

The baseline year for this Plan for all three PM_{2.5} standards is 2013. Analyses and modeling performed for this Plan demonstrate the following attainment dates to be the most expeditious attainment dates practicable:

- 1997 annual PM_{2.5} standard attainment year is 2020
- 2006 24-hour PM_{2.5} standard attainment year is 2024
- 2012 annual PM_{2.5} standard attainment year is 2025

RFP years for an attainment Plan for a particulate matter air quality standard shall be determined by the quantitative milestone deadlines.⁸ Refer to the Quantitative Milestone Requirements section below to see how milestone years were determined for each NAAQS.

Table H-1 Summary of Significant RFP and Quantitative Milestone Dates

Federal PM _{2.5} Standard	Base Year	Attainment Year	RFP and Quantitative Milestone Years
1997 PM _{2.5} NAAQS	2013	2020	2017, 2020, 2023
2006 PM _{2.5} NAAQS	2013	2024	2017, 2020, 2023, 2026
2012 PM _{2.5} NAAQS	2013	2025	2019, 2022, 2025, 2028

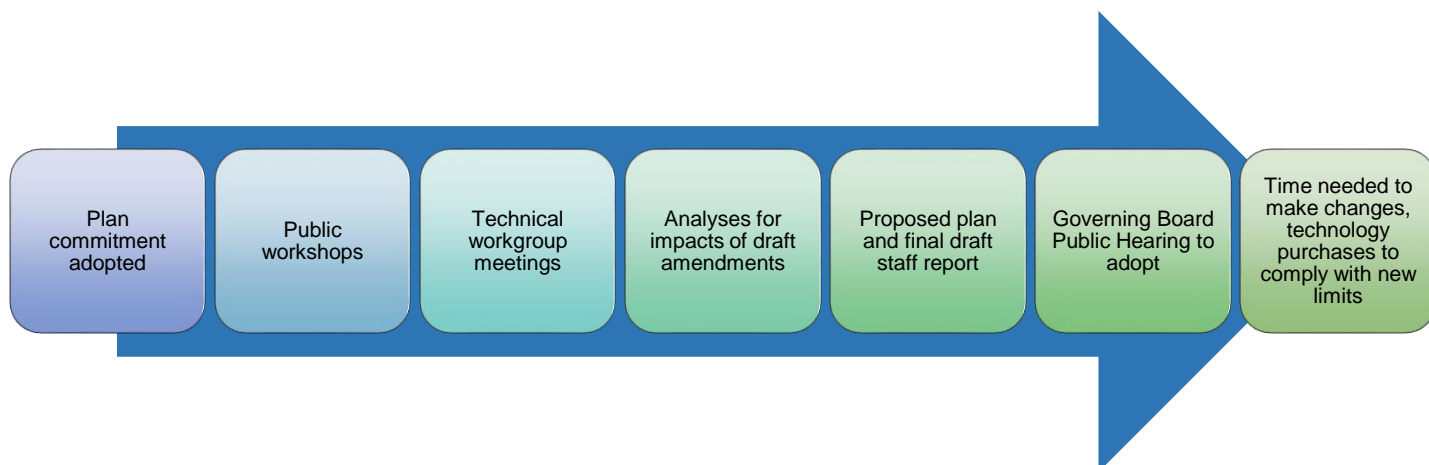
H.1.3 RFP MILESTONE REQUIREMENT TARGETS AND ATTAINMENT DEMONSTRATIONS

The following analysis demonstrates linear RFP for the 1997 PM_{2.5} standard and stepwise RFP for the 2006 and 2012 PM_{2.5} standards. The 2006 and 2012 PM_{2.5} RFP demonstration is a stepwise due to the necessary time required by the District and CARB to go through the process necessary to amend rules, develop programs, and implement the emission reduction measures.

The regulatory measures need time to undergo a robust public rulemaking process and implementation after the Plan adoption. In these efforts, the District and CARB is committed to a transparent public process that includes stakeholder, industry, and other-agency input at every step possible. As illustrated in Figure H-1, the rule amendment process is a robust process that can take significant time, sometimes years, to complete and implement.

⁸ 40 CFR 51.1012(a)(4)

Figure H-1 Rule Development and Implementation Process



For the incentive-based measures, the total emission reductions can only be achieved over multiple years due to availability of willing participants and significant funding required. Modeling demonstrates attainment as expeditiously as practicable.

H.1.4 RFP CALCULATION METHODOLOGY AND DEMONSTRATION

1. Determine the Emissions Inventory of the Valley with the Plan control strategy for the baseline year, the RFP years, and the attainment year.

Table H-2 Annual Average Emission Inventory (tpd) (see Appendix B)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025	2026
Direct PM2.5	62.5	58.9	59.2	59.0	58.5	58.4	58.3	58.3	58.3	58.4
NOx	317.2	233.3	214.5	203.3	191.0	179.8	153.6	148.9	143.7	139.4

2. Identify additional annual average emission reductions from control measure commitments (see Chapter 4).

Table H-3 Annual Average Emissions Reduced from Control Measure Commitments (tpd)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025	2026
Direct PM2.5	0	0	0	0	0	0	0	1.94	1.94	1.94
NOx	0	0	0	0	0	0	0	33.88	33.88	33.88

3. Subtract the emission reductions from Plan commitments from the existing inventory to determine the Plan inventory. (Table H-6 minus Table H-7)

Table H-4 Projected Emissions Inventory after Control Measures (tpd)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025	2026
Direct PM _{2.5}	62.5	58.9	59.2	59.0	58.5	58.4	58.3	56.4	56.4	56.4
NO _x	317.2	233.3	214.5	203.3	191.0	179.8	153.6	115.0	109.8	105.5

4. Determine the total reductions from the 2013 baseline emission inventory that must be achieved to reach attainment.

Table H-5 Total Reductions Necessary to Reach Attainment (tpd)

Pollutant	A	B	C	D	E	F	G
	2013 Base year Emissions	1997 NAAQS Attainment Emissions (2020)	1997 NAAQS Reductions Needed (A-B)	2006 NAAQS Attainment Emissions (2024)	2006 NAAQS Reductions Needed (A-D)	2012 NAAQS Attainment Emissions (2025)	2012 NAAQS Reductions Needed (A-F)
Direct PM _{2.5}	62.53	59.00	3.53	56.380	6.15	56.40	6.13
NO _x	317.21	203.25	113.96	148.87	168.34	109.82	207.39

5. Determine the fraction of reductions that are achieved in each RFP milestone year.

Where (milestone year – base year) / (attainment year – base year)

Table H-6 Milestone Year Fractions Achieved in Each Milestone Year

	Milestone Years		
	2017	2020	2023
1997 NAAQS	57.10%	100.00%	142.90%
2006 NAAQS	36.40%	63.60%	90.90%
	2019	2022	2025
2012 NAAQS	50.00%	75.00%	100.00%

6. Determine the RFP target emissions levels using reduction fractions.

Table H-7 Target Emissions Levels for RFP Milestone Years (tpd)

	A	B	C	D	E	F	G	H
			2017		2020		2023	
1997 NAAQS	2013 base year emission inventory	Reductions Needed to attain NAAQS	tons to be reduced (B x 2017 milestone percentage)	RFP target emissions level (A - C)	tons to be reduced (B x 2020 milestone percentage)	RFP target emissions level (A - E)	tons to be reduced (B x 2023 milestone percentage)	RFP target emissions level (A - G)
Direct PM2.5	62.53	3.53	2.02	60.51	3.53	59.00	5.04	57.49
NOx	317.21	113.96	65.07	252.14	113.96	203.25	162.85	154.36
2006 NAAQS								
Direct PM2.5	62.53	6.15	2.24	60.29	3.91	58.62	5.59	56.94
NOx	317.21	168.34	61.28	255.93	107.06	210.15	153.02	164.19
			2019		2022		2025	
2012 NAAQS	2013 base year emission inventory	Reductions Needed to attain NAAQS	tons to be reduced (B x 2019 milestone percentage)	RFP target emissions level (A - C)	tons to be reduced (B x 2022 milestone percentage)	RFP target emissions level (A - E)	tons to be reduced (B x 2025 milestone percentage)	RFP target emissions level (A - G)
Direct PM2.5	62.53	8.45	4.23	58.31	6.34	56.19	8.45	54.08
NOx	317.21	175.26	87.63	229.58	131.45	185.77	175.26	141.95

7. Compare RFP Target emissions level to the projected emissions inventory to demonstrate RFP

Table H-8 Demonstration of Compliance with RFP Targets for 1997 NAAQS

1997 NAAQS	2017			2020		
	RFP target emissions level	Attainment Emissions Inventory	Linear RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Linear RFP target met?
Direct PM2.5	60.51	58.93	YES	59	59.00	YES
NOx	252.14	233.31	YES	203.25	203.25	YES

Table H-9 Demonstration of Compliance with Stepwise RFP Targets for 2006 NAAQS

2006 NAAQS	2017			2020			2023		
	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?
Direct PM2.5	60.29	58.93	YES	59.00	59.00	YES	58.27	58.27	YES
NOx	255.93	233.31	YES	210.15	203.25	YES	164.19	153.63	YES

Table H-10 Demonstration of Compliance with Stepwise RFP Targets for 2012 NAAQS

2012 NAAQS	2019			2022			2025		
	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?
Direct PM2.5	59.18	59.18	YES	58.42	58.42	YES	56.40	56.40	YES
NOx	229.58	214.45	YES	185.77	179.75	YES	141.95	109.82	YES

H.2 QUANTITATIVE MILESTONES

Consistent with CAA §189(c)(1), the state must submit in each attainment Plan for a PM2.5 nonattainment area specific quantitative milestones that demonstrate reasonable further progress toward attainment of the applicable PM2.5 NAAQS in the area.

H.2.1 QUANTITATIVE MILESTONE REQUIREMENTS

Quantitative milestones in a state implementation Plan shall meet the following requirements:⁹

1. Nonattainment areas initially classified as Moderate

- a. Milestones achieved no later than a milestone date of 4.5 years and 7.5 years from the date of designation of the area.
- b. Milestones that provide for objective evaluation of reasonable further progress toward timely attainment of the applicable PM2.5 NAAQS in the area. At a minimum, each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing the SIP control measures, including RACM and RACT, by each milestone date.

2. Areas reclassified as Serious

- a. For areas that can attain the NAAQS by the end of the tenth calendar year following the effective date of designation, milestone dates of 7.5 years and 10.5 years respectively, from the date of designation of the area
- b. For areas that cannot attain the NAAQS by the end of the tenth calendar year following the effective date of designation, milestone dates of 7.5 years, 10.5 years, and 13.5 years from the date of designation. If the attainment date is beyond 13.5 years from the date of designation, such Plan shall also contain a quantitative milestone to be achieved no later than milestones dates of 16.5 years, respectively from the date of designation of the area.
- c. Milestones that provide for objective evaluation of RFP toward timely attainment of the NAAQS in the area. At a minimum each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing SIP control measures, including BACM and BACT by each milestone date.

3. Serious areas that fail to attain by the applicable Serious area attainment date

- a. If the attainment Plan is due prior to a date 13.5 years from designation of the area, then the Plan shall contain milestones to be achieved by no later than a milestone date of 13.5 years from the date of designation of the area, and every three years thereafter, until the milestone date that falls within three years *after* the applicable attainment date.
- b. If the attainment Plan is due later than a date 13.5 years from designation, then the Plan shall contain milestones to be achieved by no later than a milestone date of 16.5 years from the date of designation of the area, and

⁹ 40 CFR §51.1013 Quantitative milestone requirements.

- every three years thereafter, until the milestone date that falls within three years *after* the applicable attainment date.
- c. Milestones that provide for objective evaluation of RFP toward timely attainment of the NAAQS. At a minimum, each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing the SIP control measures by each milestone date.

4. Areas designated for 1997 and/or 2006 PM_{2.5} NAAQS before January 15, 2015

- a. Each attainment Plan submission for an area designated nonattainment for the 1997 and/or 2006 PM_{2.5} NAAQS before January 15, 2015, shall contain quantitative milestone to be achieved no later than 3 years after December 31, 2014, and every three years thereafter until the milestone date that falls within three years *after* the applicable attainment date.

H.2.1.1 1997 NAAQS

As discussed throughout this Plan, EPA designated the Valley for the 1997 NAAQS on January 5, 2005 (see Chapter 1 for a timeline). Additionally, the Valley failed to attain by the applicable Serious area attainment date. As such, the quantitative milestones for this Plan are guided by requirement 3.c and 4 above. The Valley will attain the 1997 NAAQS in 2020. See Table H-11 for milestone years. Table H-1

H.2.1.2 2006 NAAQS

As discussed throughout this Plan, EPA designated the Valley for the 2006 NAAQS on November 13, 2009 (see Chapter 1 for a timeline). The Valley is designated Serious nonattainment for this standard. As such, the quantitative milestones for this Plan are guided by requirement 2.c and 4 above. The Valley will attain the 2006 NAAQS in 2024. See Table H-11 for milestone years.

H.2.1.3 2012 NAAQS

The Valley is designated Moderate for this NAAQS. This Plan will satisfy Moderate area requirements and the District is proactively satisfying Serious area requirements simultaneously in this Plan. The quantitative milestones for this Plan are guided by requirement 1 and 2 above. The Valley will attain the 2012 NAAQS in 2025. See Table H-11 for quantitative milestone years.

Table H-11 Quantitative Milestone Dates and Deadlines

NAAQS	Quantitative Milestone Dates	Milestone Report Due Date
1997	December 31: 2017, 2020, 2023	March 31: 2018, 2021, 2024
2006	December 31: 2017, 2020, 2023, 2026	March 31: 2018, 2021, 2024, 2027
2012	October 15: 2019, 2022, 2025, 2028	January 15: 2020, 2023, 2026, 2029

H.2.3 STATIONARY SOURCES QUANTITATIVE MILESTONE COMMITMENTS

The District will report on milestones for implementation of stationary source reductions set forth in District Board-adopted attainment Plans as well as this this 2018 PM2.5 Plan.

H.2.3.1 1997 NAAQS Quantitative Milestones

The 1997 65 $\mu\text{g}/\text{m}^3$ 24-hour and 15 $\mu\text{g}/\text{m}^3$ annual standards have quantitative milestone years in 2017, 2020, and 2023.

2017

For the 2018 milestone report for the 2017 milestone, the District is reporting on the following milestones (see Attachment B):

- Implementation of amendments to the District's residential wood burning program from 2014 through 2017 that required lower No Burn thresholds for high polluting wood burning heaters and fireplaces and enhancements to the District Burn Cleaner incentive program;
- Implementation of Rule 4308 (Boilers, Steam Generators, and Process Heaters (0.075 to <2 MMBtu/hr)) regulation requirements from 2015 through 2017 that required lower NOx emission limits for instantaneous water heaters with a rated heat input of 0.075 to 0.4 MMBtu/hr;
- Implementation of Rule 4354 (Glass Melting Furnaces) regulation requirements from 2013 through 2017 that required lower emission limits for NOx, SOx, and PM10 on glass melting furnaces in the Valley;
- Implementation of Rule 4702 (Internal Combustion Engines) regulation requirements from 2013 through 2017 that required lower NOx and SOx emission limits for various types of engines;
- Implementation of Rule 4902 (Residential Water Heaters) regulation requirements from 2013 through 2017 that required lower NOx emission limits for new residential natural gas-fired water heaters; and
- Implementation of Rule 4905 (Reduction of NOx Emissions from Natural Gas-Fired, Fan-Type Central Furnaces) regulation requirements from 2015 through 2017 that required lower NOx emission limits for natural gas-fired, fan-type, central furnaces.

2020

For the 2020 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2023

For the 2023 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

H.2.3.2 2006 NAAQS Quantitative Milestones

The 2006 35 µg/m³ 24-hour standard has quantitative milestone years in 2017, 2020, 2023, and 2026.

2017

The For the 2017 milestone year, the District is reporting on the following milestones (see Attachment B to this Plan):

- Implementation of amendments to the District's residential wood burning program from 2014 through 2017 that required lower No Burn thresholds for high polluting wood burning heaters and fireplaces and enhancements to the District Burn Cleaner incentive program;
- Implementation of Rule 4308 (Boilers, Steam Generators, and Process Heaters (0.075 to <2 MMBtu/hr)) regulation requirements from 2015 through 2017 that required lower NOx emission limits for instantaneous water heaters with a rated heat input of 0.075 to 0.4 MMBtu/hr;
- Implementation of Rule 4354 (Glass Melting Furnaces) regulation requirements from 2013 through 2017 that required lower emission limits for NOx, SOx, and PM10 on glass melting furnaces in the Valley;
- Implementation of Rule 4702 (Internal Combustion Engines) regulation requirements from 2013 through 2017 that required lower NOx and SOx emission limits for various types of engines;
- Implementation of Rule 4902 (Residential Water Heaters) regulation requirements from 2013 through 2017 that required lower NOx emission limits for new residential natural gas-fired water heaters; and
- Implementation of Rule 4905 (Reduction of NOx Emissions from Natural Gas-Fired, Fan-Type Central Furnaces) regulation requirements from 2015 through 2017 that required lower NOx emission limits for natural gas-fired, fan-type, central furnaces.

2020

For the 2020 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2023

For the 2023 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2020 and 2023 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2026

For the 2026 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy
- The status of SIP measures adopted between 2023 and 2026 as per the schedule included in the adopted Plan.

H.2.3.3 2012 NAAQS Quantitative Milestones

The 2012 12 $\mu\text{g}/\text{m}^3$ annual standard has quantitative milestone years in 2019, 2022, 2025, and 2028.

2019

For the 2019 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2019 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2022

For the 2022 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2019 and 2022 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2025

For the 2025 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy

- The status of SIP measures adopted between 2022 and 2025 as per the schedule included in the adopted Plan.

2028

For the 2028 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy
- The status of SIP measures adopted between 2023 and 2026 as per the schedule included in the adopted Plan.

H.2.4 MOBILE SOURCES QUANTITATIVE MILESTONE COMMITMENTS

[This section provided by the California Air Resources Board]

Mobile Source Quantitative Milestones for the San Joaquin Valley

CARB will report on milestones for implementation of mobile source reductions set forth in the *2016 State Strategy for the State Implementation Plan* (State SIP Strategy) and new measures in the *Proposed San Joaquin Valley Supplement to the 2016 State Strategy for the State Implementation Plan* (Valley State SIP Strategy).

The 1997 **65** $\mu\text{g}/\text{m}^3$ 24-hour and **15** $\mu\text{g}/\text{m}^3$ annual standards have quantitative milestone years in **2017**, **2020**, and **2023**.

2017

For the 2017 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2012 and 2017 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of the *Advanced Clean Cars Program* (the ACC Program) between 2014 and 2017 that required manufacturers of new light-duty passenger vehicles sold in California to limit emissions; and
3. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.

2020

For the 2020 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2020 that required particulate

filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and

2. The status of SIP measures adopted between 2017 and 2020, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program* as part of the *Lower In-Use Emission Performance Level* measure.

2023

For the 2023 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2020 and 2023 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and
2. Implementation of the California *Low-NOx Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

The 2006 **35** $\mu\text{g}/\text{m}^3$ 24-hour standard has quantitative milestone years in **2017**, **2020**, **2023**, and **2026**.

2017

For the 2017 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2012 and 2017 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of the *Advanced Clean Cars Program* (the ACC Program) between 2014 and 2017 that required manufacturers of new light-duty passenger vehicles sold in California to limit emissions; and
3. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.

2020

For the 2020 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2020 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and
2. The status of SIP measures adopted between 2017 and 2020, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program*.

2023

For the 2023 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2020 and 2023 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and

2. Implementation of the California *Low-NOx Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

2026

For the 2026 milestone year, CARB is reporting on the following two milestones:

1. Identify the number of pieces of agricultural equipment turned over to Tier 4 Final due to the *Accelerated Turnover of Agricultural Tractors Measure* through 2026; and
2. Identify the number of trucks and buses turned over to a low-NOx engine or cleaner due to the *Accelerated Turnover of Trucks and Buses Measure* through 2026.

The 2012 $12 \mu\text{g}/\text{m}^3$ annual standard has quantitative milestone years in **2019**, **2022**, **2025**, and **2028**.

2019

For the 2019 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2019 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.
3. The status of SIP measures adopted between 2017 and 2019, including the California *Low-NOx Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

2022

For the 2022 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2019 and 2022 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. The status of SIP measures adopted between 2019 and 2022, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program*.

2025

For the 2025 milestone year, CARB is reporting on the following three milestones:

1. Identify the number of pieces of agricultural equipment turned over to Tier 4 Final due to the *Accelerated Turnover of Agricultural Tractors Measure* through 2025;
2. Identify the number of trucks and buses turned over to a low-NOx engine or cleaner due to the *Accelerated Turnover of Trucks and Buses Measure* through 2025; and
3. The status of SIP measures adopted between 2022 and 2025, including the proposed *Cleaner In-Use Agricultural Equipment Measure* to incentivize the penetration of cleaner agricultural equipment used in California.

2028

For the 2028 milestone year, CARB is reporting on the following milestone:

1. Implementation of the *Advanced Clean Cars 2* requirements between 2026 and 2028.

H.3 CONTINGENCY MEASURES

The Clean Air Act provides that a nonattainment SIP shall provide for the implementation of specific measures to be undertaken in the future¹⁰ if the area fails to make reasonable further progress, or to attain the national primary ambient air quality standard by the attainment date. Such measures shall be included in the Plan revision as contingency measures to take effect in any such case without further action by the State or by EPA.

- **RFP contingencies:** Used if planned emissions controls fail to reach the emissions targets specified in the attainment Plan for RFP. The need to implement RFP contingencies is based on the emissions inventory in the RFP milestone years.
- **Attainment contingencies:** Used if a region fails to attain a federal standard by the final attainment date. The need to implement attainment contingencies is based on ambient air quality data as of the end of the attainment year. If EPA finds that an area fails to attain a standard on time.

H.3.1 WHAT QUALIFIES AS A CONTINGENCY MEASURE?

Contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly without significant additional action by the state or local agency or by EPA.¹¹ The Plan should contain trigger mechanisms and a schedule for the contingency measure implementation.

H.3.2 CONTINGENCIES

The District is working closely with CARB to develop EPA approvable contingency commitments for this Plan.

As discussed above, contingencies are required for the following years:

- 1997 65 $\mu\text{g}/\text{m}^3$ 24-hour and 15 $\mu\text{g}/\text{m}^3$ annual standards: 2017, 2020, and 2023
- 2006 35 $\mu\text{g}/\text{m}^3$ 24-hour standard: 2017, 2020, 2023, and 2026
- 2012 12 $\mu\text{g}/\text{m}^3$ annual standard: 2019, 2022, 2025, and 2028

¹⁰ US Court of Appeals for the Ninth Circuit. Sandra L. Bahr; David Matusow v. US EPA; Gina McCarthy, Jared Blumenfeld, EPA Region IX. No. 14-72327 (2016, September 12)

¹¹ Clean Air Act Section 172(c)9, 40 CFR 51.1012.

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