Chapter 6

Federal and State Clean Air Act Requirements

The environmentally historic federal Clean Air Act (CAA) was amended in 1990 to require planning provisions for those areas in the nation not currently meeting the national ambient air quality standards. As such, the AQMP is required to include a series of elements and demonstrations to comply with federal CAA requirements.

In This Chapter

Introduction

The 2016 AQMP is designed to satisfy the SIP submittal requirements of the federal CAA to demonstrate attainment of the 2006 24-hour and 2012 annual PM2.5, and the 2008 8-hour ozone ambient air quality standards, the CCAA triennial update requirements, and the SCAQMD's requirement to update transportation emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. Specific information related to the air quality and planning requirements for portions of the SSAB under the SCAQMD's jurisdiction are included in Chapter 7. The Final 2016 AQMP will be submitted to U.S. EPA as a SIP revision upon approval by the SCAQMD Governing Board and CARB.

In November 1990, Congress enacted a series of amendments to the CAA intended to intensify air pollution control efforts across the nation. One of the primary goals of the 1990 CAA amendments was to overhaul the planning provisions for those areas not currently meeting the NAAQS. The CAA identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and attainment, and incorporates more stringent sanctions for failure to attain or to meet interim milestones. Title I (*Air Pollution Prevention and Control*) of the CAA contains four parts (Part A through Part D) that provide provisions for air pollution prevention and control. Specifically, Part D describes the Plan requirements for nonattainment areas within six subparts as outlined in Figure 6-1. Subpart 1 describes the general provisions that apply to all applicable criteria pollutants unless superseded by pollutant-specific requirements in Subparts 2 through 5.

There are several sets of general planning requirements in the CAA, both for nonattainment areas [Section 172(c)] and for SIPs in general [Section 110(a)(2)]. These requirements are listed and briefly described in Chapter 1. This chapter presents the CAA requirements for the PM2.5 and ozone NAAQS, and demonstrates how the 2016 AQMP satisfies these requirements.

There are both primary and secondary air quality standards. Primary standards are designed to protect public health including the health of "sensitive" populations including asthmatics, children, and the elderly. Secondary standards protect public welfare and includes the protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

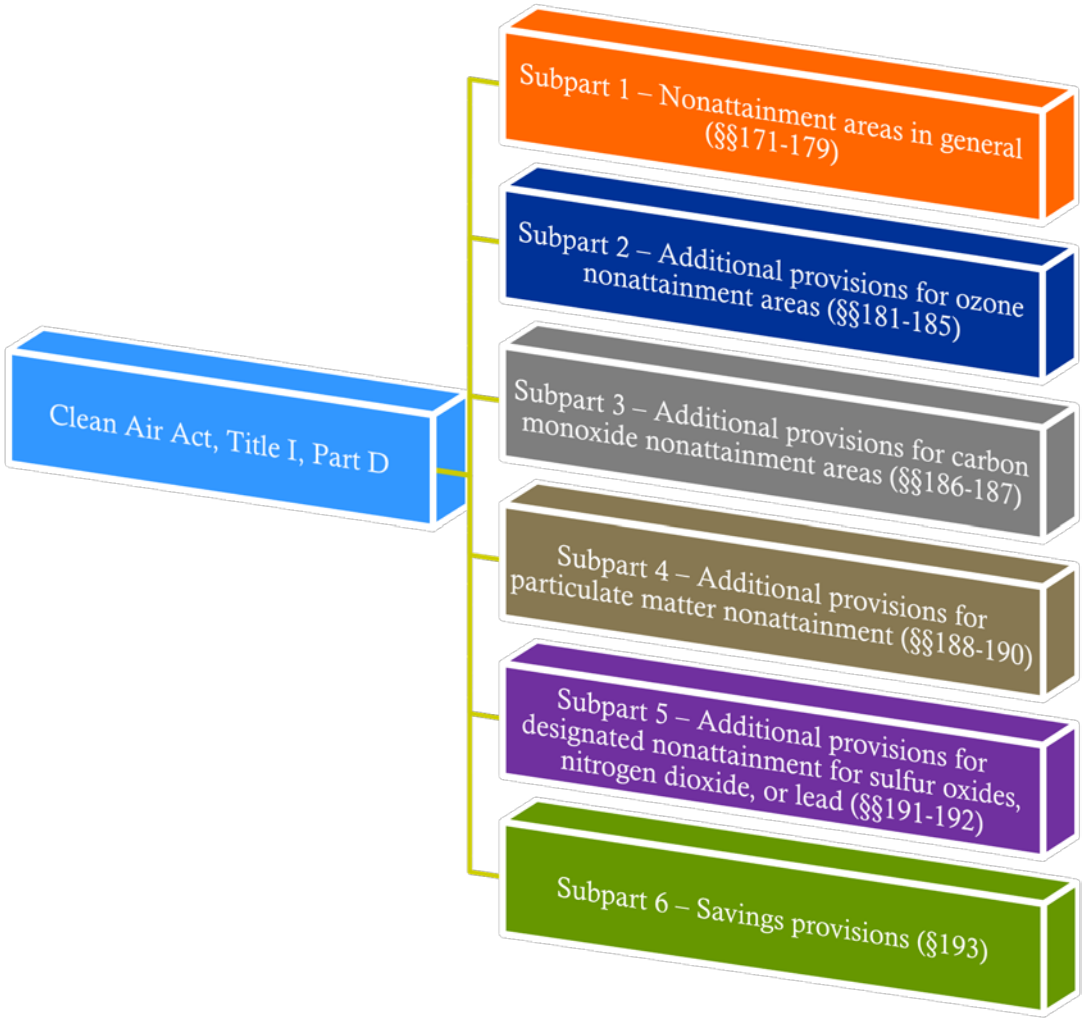

FIGURE 6-1
CLEAN AIR ACT, TITLE I, PART D – PLAN REQUIREMENTS FOR NONATTAINMENT AREAS

Federal Air Quality Standards for Fine Particulates

The U.S. EPA first promulgated the NAAQS for Fine Particles (PM2.5) in July 1997. Following legal challenges, the standards were eventually upheld in March 2002. The annual standard was set at a level of 15 micrograms per cubic meter (µg/m^3), based on the three-year average of annual mean PM2.5 concentrations. The 24-hour standard was set at a level of 65 µg/m^3 based on the three-year average of the 98th percentile of 24-hour concentrations. The U.S. EPA issued nonattainment designations in December 2004, which became effective on April 5, 2005.

In January 2006, the U.S. EPA proposed a more stringent 24-hour PM2.5 standard. Before promulgating new standards, the U.S. EPA follows an extensive review process. That process led U.S. EPA to the conclusion that the existing standards for particulates were not adequate to protect public health. The studies indicated that short-term exposures at levels below the 24-hour standard of 65 µg/m^3 caused acute health

effects, including asthma attacks and respiratory problems. As a result, in 2006 the U.S. EPA established a new, lower 24-hour average standard for PM2.5 at 35 µg/m^3. No changes were made to the annual PM2.5 standard which remained at 15 µg/m^3 at that time. For the 2006 24-hour PM2.5 standard, the form of the standard continues to be based on the 98th percentile of 24-hour PM2.5 concentrations measured in a year (averaged over three years) at the monitoring site with the highest measured values in an area. This form of the standard was determined to be health protective while providing a more stable metric (percentile form) to facilitate effective control programs. Effective December 14, 2009, the U.S. EPA designated the Basin as nonattainment for the 2006 24-hour PM2.5 NAAQS.

On June 14, 2012, the U.S. EPA proposed revisions to strengthen the primary annual PM2.5 NAAQS. The annual component of the standard provides protection against typical day-to-day exposures as well as longer-term exposures, while the daily standard protects against higher short-term events. On December 14, 2012, U.S. EPA strengthened the primary annual PM2.5 standard to 12 µg/m^3 and issued final designations on December 18, 2014, designating the Basin as nonattainment. U.S. EPA retained the secondary annual PM2.5 standard of 15 µg/m^3 and the 24-hour PM2.5 standard of 35 µg/m^3. Monitoring data indicates that the former 1997 primary annual PM2.5 standard of 15 µg/m^3 was attained in the Basin in 2015, but U.S. EPA has not yet formally acted on this finding. Figure 6-2 summarizes the U.S. EPA's PM2.5 standards to date.

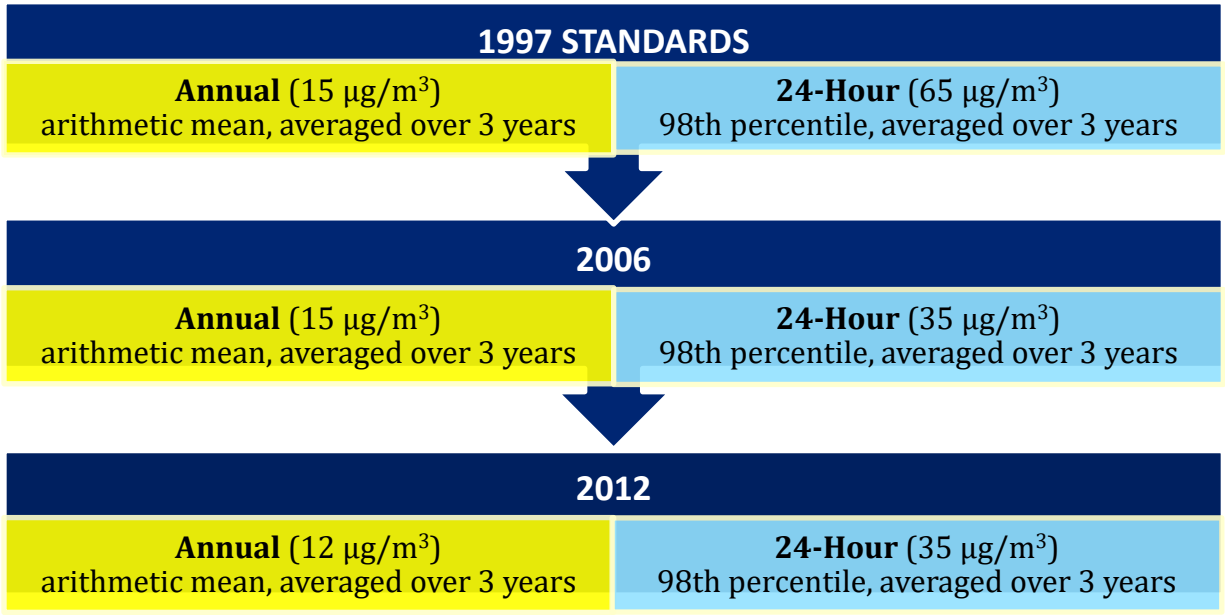

FIGURE 6-2
U.S. EPA'S PM2.5 STANDARDS

For the 2006 24-hour standards, the U.S. EPA required the SIP to be submitted no later than three years after the designation, hence December 14, 2012. The 2012 AQMP projected attainment of the 2006 24-hour PM2.5 NAAQS by 2014; however, due to the effects of the region's several-year drought on air quality, attainment by 2014 was deemed not possible.

In January 2013, the U.S. Court of Appeals, D.C. Circuit, ruled that the U.S. EPA erred in implementing the 1997 PM2.5 NAAQS pursuant solely to the general implementation provisions of Subpart 1, without considering the particulate matter specific provisions of Subpart 4. Although Subpart 4 relates to PM10, the Court reasoned that the plain meaning of the CAA requires implementation of the 1997 PM2.5 standards under Subpart 4 because PM2.5 particles fall within the statutory definition of PM10 and are thus subject to the same statutory requirements as PM10. Subpart 4 is more specific about what states must do to bring areas into attainment through the establishment of a two-tier classification system for nonattainment areas ("moderate" or "serious"). Subpart 4 also has specific provisions regarding regulation of precursors of PM emissions that are not present in Subpart 1. On June 2, 2014, U.S. EPA classified the Basin as "moderate" nonattainment under Subpart 4. In March 2015, U.S. EPA issued "*Proposed Rule for Implementing the National Air Quality Standards for Fine Particles*" that provides the proposed planning requirements framework for the 2012 and future PM2.5 NAAQS pursuant to Subpart 4, in addition to the Subpart 1 provisions. On August 24, 2016, the implementation rule was finalized (81 FR 58010), establishing nonattainment SIP requirements for areas that do not meet the NAAQS for fine particle pollution.

Consistent with Subpart 4, states have until 2021 to meet the 2012 annual PM2.5 standard for "moderate" nonattainment areas, and if necessary, up to four additional years (2025) if the area is re-classified as "serious" nonattainment. Annual PM2.5 emissions in the Basin have experienced a steady decline over the last decade with monitoring data showing attainment of the previous annual PM2.5 standard (15.0 $\mu g/m^3$). The 2016 AQMP demonstrates how the region will achieve the 2012 annual PM2.5 standard (12.0 $\mu g/m^3$) as expeditiously as practicable, but no later than the statutory attainment deadline.

Under Subpart 4, the attainment date for a "moderate" nonattainment area is the end of the 6th calendar year after the effective date of designation, and for a "serious" area, the attainment date is the end of the 10th calendar year after effective date of designation. Therefore, the "moderate" area attainment dates for the Basin are December 31, 2021 for the 2012 annual PM2.5 standard and December 31, 2015 for the 2006 24-hour PM2.5 standard. In July 2015, SCAQMD submitted a formal request to the U.S. EPA to reclassify the Basin as a "serious" nonattainment area for the 24-hour PM2.5 NAAQS based on the monitoring data, which indicated that attainment is not practicable by December 31, 2015.

On October 20, 2015, U.S. EPA issued a proposed rule to partially approve the PM2.5 portion of the 2012 AQMP and the 2015 AQMP Supplement for the 2006 24-hour PM2.5 NAAQS. Approved commitments in the Plan and Supplement included carrying out technology assessments on under-fired charbroilers (by 2017) and livestock waste (by 2016), and NOx RECLAIM reductions by 2015. The attainment demonstration was not approved as it was deemed impractical to attain by 2015 and the region was reclassified as "serious" nonattainment for 24-hour PM2.5, consistent with Subpart 4.

As a result, the 2006 24-hour standard has an attainment date as expeditiously as practicable, but no later than December 31, 2019. A "serious" area attainment plan needs to be submitted no later than 18 months after the effective date, hence, by August 12, 2017. More stringent "serious" nonattainment area requirements apply including implementation of Best Available Control Measures / Best Available Control

Technology (BACM/BACT), a lower major source emissions threshold (from 100 tons per year to 70 tons per year), and an update to the reasonable further progress (RFP) analysis given the longer attainment time frame. Figure 6-3 provides a general timeline for the implementation of the PM2.5 standards in the Basin.

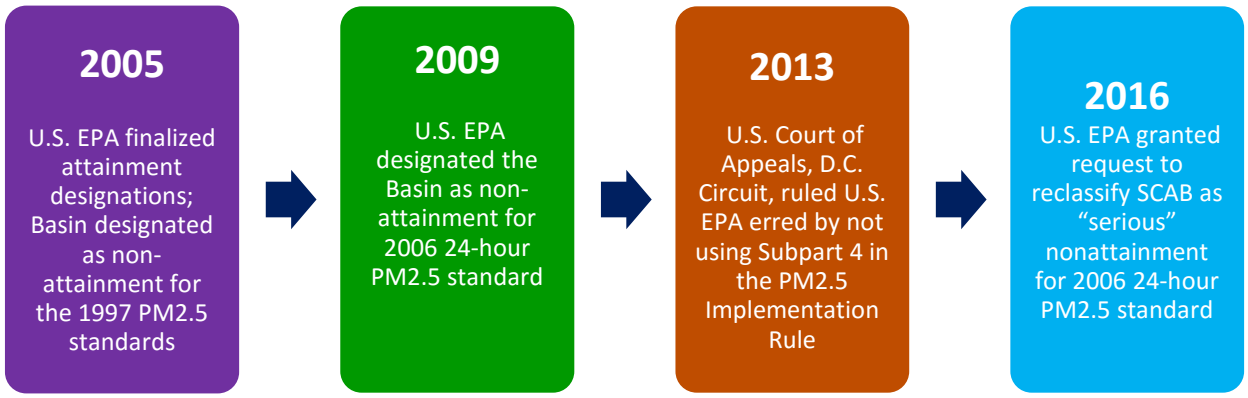

FIGURE 6-3
TIMELINE FOR THE IMPLEMENTATION OF PM2.5 NAAQS IN THE BASIN

Federal Air Quality Standards for Ozone

Background

In 1979, U.S. EPA established a primary health-based NAAQS for ozone at 120 ppb averaged over a 1-hour period. Pursuant to the 1990 CAA amendments, U.S. EPA later classified nonattainment areas on a scale from "marginal" to "extreme," based on the severity of the ozone problem. "Extreme" areas were provided the most time to attain the standard, until November 15, 2010, but with more stringent requirements. The Basin was classified as "extreme" nonattainment on November 6, 1991 and a 1-hour ozone SIP was submitted in 1994 by the SCAQMD and CARB. U.S. EPA approved the 1-hour ozone SIP for the South Coast in 1997 as well as the CARB revisions to the SIP in 2000. Subsequently, revisions to the 1-hour ozone SIP in 2003 included updated emissions inventories along with new commitments to achieve VOC and NOx reductions. In 2009, U.S. EPA approved certain elements of the 2003 SIP but disapproved the attainment demonstration, largely because CARB withdrew emission reduction commitments in 2008 rendering the plan insufficient to demonstrate attainment. U.S. EPA concluded that consequences[1] for a disapproved plan were initially not triggered because U.S. EPA determined that the approved SIP already contained an approved 1-hour attainment demonstration meeting CAA requirements, which was all that was necessary regarding the now revoked 1-hour standard.[2] Litigation on this issue resulted in the Court stating

[1] Consequences include highways sanctions, increased offset ratio (NSR), and a Federal Implementation Plan (FIP) (CAA, Title I, Part D, Subpart 1, Section 179).

[2] In 1997, U.S. EPA promulgated a new more stringent 8-hour ozone standard of 80 ppb to replace the 1-hour standard. *62 Fed. Reg. 38856 (July 18, 1997).*

in 2012 that "U.S. EPA should have ordered California to submit a revised attainment plan for the South Coast after it disapproved the 2003 Attainment Plan."

In response to a U.S. EPA "SIP call" that same year, a plan containing a demonstration of attainment of the 1-hour ozone NAAQS was included as part of the 2012 AQMP and approved by U.S. EPA effective October 3, 2014. U.S. EPA's approval of this plan is in litigation. The Basin has not achieved the current or previous 8-hour or 1-hour NAAQS to date. The 2016 AQMP provides an updated attainment demonstration with the latest NOx and VOC reduction commitments to ensure the 1-hour ozone NAAQS is met by December 31, 2022.

In July 1997, U.S. EPA replaced the 1-hour ozone standard with an 8-hour standard. The 8-hour ozone standard established by U.S. EPA was challenged, and eventually upheld in March 2002. The 1997 8-hour ozone standard was set at 0.08 ppm, calculated as the annual fourth-highest daily maximum 8-hr concentration, averaged over three years. The U.S. EPA finalized Phase 1 of the ozone implementation rule in April 2004. This rule set forth the classifications for nonattainment areas and continued obligations with respect to the existing 1-hour ozone requirements. As described by the Phase 1 rule, the Basin was classified as "severe-17" with an attainment date of June 2021, while the portion of the SSAB under the District's jurisdiction (Coachella Valley Planning Area) was classified as "serious", with an attainment date of June 2013. In May 2010, the U.S. EPA granted the State's request to (1) reclassify the Basin as an "extreme" nonattainment area with an attainment date of 2024 for ozone and (2) designate the Coachella Valley as "severe-15" with an attainment date of 2019. The federal 1-hour ozone standard was revoked, effective June 15, 2005, but "anti-backsliding" measures, including implementation of an approved attainment plan, remain in effect for areas that have not yet attained these standards.

On March 12, 2008, U.S. EPA lowered the NAAQS for ground-level ozone to a level of 75 ppb from the previous standard of 80 ppb, set in 1997. U.S. EPA designated the Basin as "extreme" nonattainment effective July 20, 2012, and pursuant to the CAA Section 181(a)(1), the U.S. EPA requires that all areas with an "extreme" classification meet the 2008 8-hour ozone standard as expeditiously as practicable but no later than 20 years from the effective date of designation, or July 20, 2032. It should be noted that since the attainment deadline falls mid-year, emission reductions need to be in place by January 1, 2031, so that they are realized in the full previous calendar of 2031. The 1997 ozone standard was subsequently revoked effective July 20, 2013, but areas are still subject to anti-backsliding provisions.

In March 2015, U.S. EPA finalized the "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements." This final rule addresses a range of nonattainment area SIP requirements for the 2008 ozone NAAQS, and serves as a guideline for the development of the 2016 AQMP. In addition, the new 2015 8-hour ozone NAAQS highlights the continuing work needed to meet the new standard. Figure 6-4 summarizes the U.S. EPA's ozone standards to date. Figure 6-5 provides a timeline for the implementation of the ozone standards.

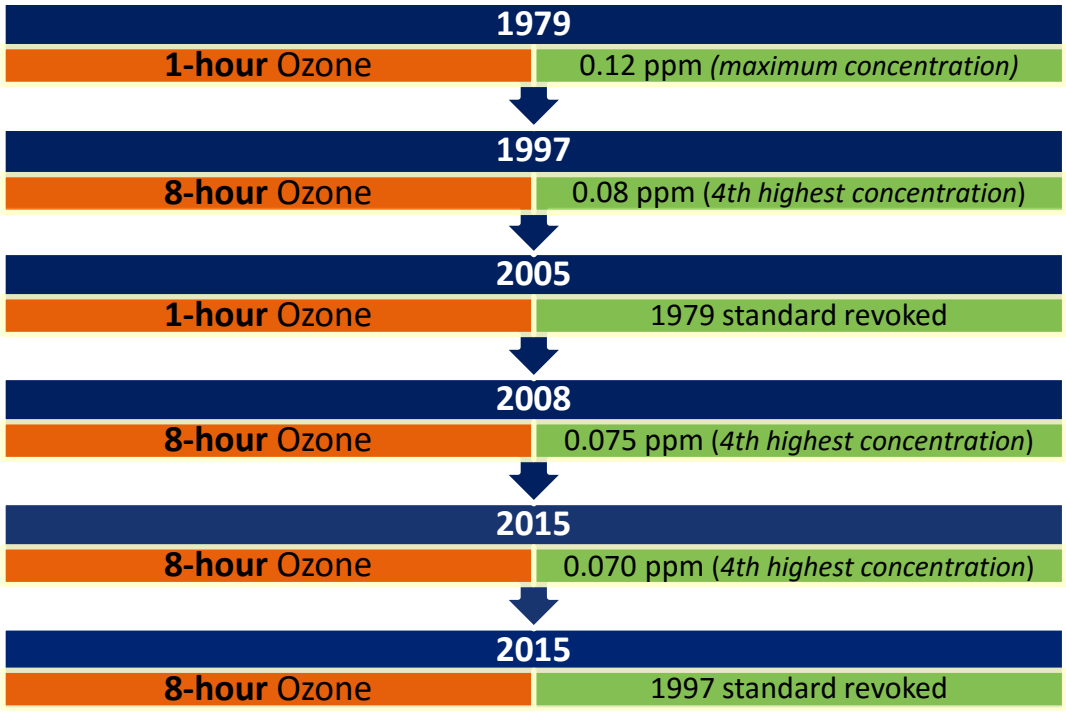

FIGURE 6-4
U.S. EPA'S OZONE STANDARDS

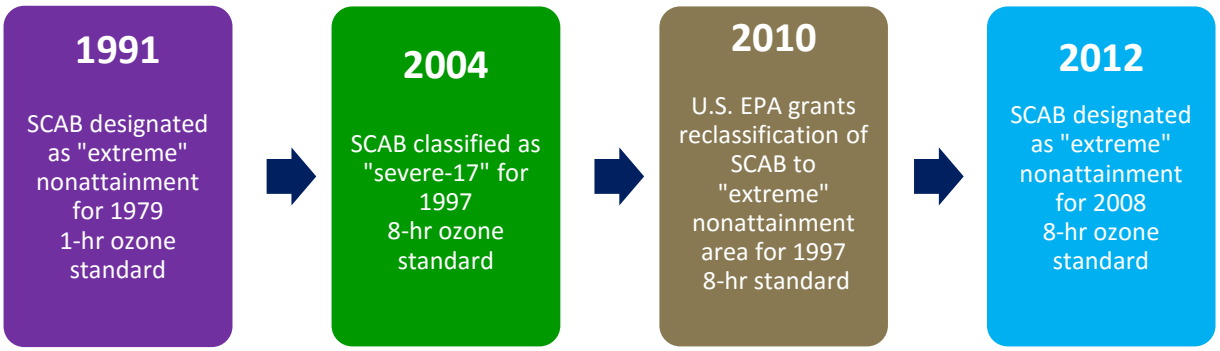

FIGURE 6-5
TIMELINE FOR THE IMPLEMENTATION OF OZONE NAAQS IN THE BASIN

Federal Clean Air Act Requirements for Nonattainment Areas

For areas such as the Basin that are classified nonattainment for the PM2.5 and ozone NAAQS, Section 172 of Subpart 1 of the CAA applies. Section 172(c)(1) of the CAA requires nonattainment areas to provide for implementation of all Reasonably Available Control Measures (RACM) as expeditiously as possible, including the adoption of reasonably available control technology (RACT). Section 172(c)(2) requires that nonattainment areas demonstrate RFP. A comprehensive emission inventory is required under Section 172(c)(3). Nonattainment area SIPs must include control strategies (Section 172(c)(6)), contingency measures (Section 172(c)(9)), and provisions for making demonstrations of conformity (Section 176(c)). However, U.S. EPA's March 2015 ozone implementation rule provides that "extreme" areas with approved Section 182(e)(5) commitments only had to submit contingency measures under three years before the attainment date, and not the general CAA contingency measures. Section 172(c)(5) requires the implementation of a new source review program including the use of "lowest achievable emission rate" for major sources referred to under state law as "Best Available Control Technology" (BACT) for contributors to PM2.5 and precursor emissions (i.e., precursors of secondary particulates).

Subpart 2

Subpart 2 provides additional provisions for ozone nonattainment areas. An attainment demonstration is required under Section 182(c)(2)(A) for areas classified as "serious" or above. Areas classified as "severe" or "extreme" nonattainment are required to demonstrate that sufficient transportation control strategies and transportation control measures have been identified to offset growth in emissions due to growth in vehicle miles traveled (VMT) under Section 182(d)(1)(A). Section 182(g) requires that each nonattainment area (other than an area classified as "marginal" or "moderate") achieve specific emission reduction targets in the applicable milestone years.

Emissions Statements

Subpart 2 Section 182(a)(3)(B)(i) requires "the SIP to require that the owner or operator of each stationary source of oxides of nitrogen or volatile organic compounds provide the State with a statement for classes or categories of sources, showing the actual emissions of oxides of nitrogen and volatile organic compounds from that source." Section 182(a)(3)(B)(ii) waives the requirement if the stationary source emits less than 25 tons per year of VOC or NOx. SCAQMD satisfies this requirement through the approved SCAQMD Rule 301[3] paragraph (e)(2) that requires emission reporting from all sources emitting 4 tons per year or more of VOC/NOx and paying a fee "for all actual source emissions including but not limited to permitted, unpermitted, unregulated and fugitive emissions." Each facility with total emissions greater than or equal to 4 tons per year from each air contaminant (e.g., specific organic gases, oxides of nitrogen, total particulate matter) shall report all emissions and incur emission fees. Thus, Rule 301 requires more stringent reporting

[3] http://www.aqmd.gov/docs/default-source/rule-book/reg-iii/rule-301.pdf?sfvrsn=4.

from VOC and NOx stationary source emissions than is required under the CAA Section 182(a)(3)(B), thus satisfying the Emissions Statements clause.

Subpart 4

Additional provisions for PM nonattainment areas are listed in Subpart 4. Section 189 requires states with nonattainment areas to submit an attainment demonstration. Section 189(c) requires the submission of quantitative milestones every three years until the attainment date. Under Section 189(e), control requirements that apply to PM2.5 are also applicable to the precursors of PM, namely NOx, SO_2, VOC and ammonia. Best Available Control Measures (BACM) are required for "serious" nonattainment areas under Section 189(b)(1)(B).

Table 6-1 summarizes the federal CAA requirements for the 2006 and 2012 PM NAAQS and the 2008 Ozone NAAQS, and outlines the 2016 AQMP chapters and appendices that fulfill the statutory requirements; for Coachella Valley, part of these plan provisions, such as attachment status, RFP and milestones, and VMT offset, are presented in Chapter 7.

While U.S. EPA revoked the 1979 1-hour ozone standard in 2005, the U.S. EPA's published "SIP call" proposal on September 19, 2012 found the then-approved 1-hour ozone SIP substantially inadequate to provide for attainment of the revoked 1-hour ozone standard by the applicable attainment date of November 15, 2010. U.S. EPA's proposed SIP call was in response to the decision of the Ninth Circuit Court of Appeals in *Association of Irritated Residents v. United States Environmental Protection Agency,* 686 F. 3d 668 (Amended January 12, 2012). As a result, the 2012 AQMP included an attainment demonstration for the 1-hour ozone standard and included demonstrations to address the VMT emissions offset requirements of CAA Section 182(d)(1)(A). Approval of this plan is under litigation. As U.S. EPA replaced the 1997 8-hour ozone standard with a more health-protective 2008 8-hour ozone standard, the 1997 ozone standard was revoked in April 2015. With respect to the 1997 8-hour ozone standard, the SCAQMD indicated that, while the 2012 AQMP updated the approved 1997 8-hour ozone control strategy with new measures for VOC and NOx reductions, it was not intended as an update to other elements of the approved 8-hour ozone control plan. In August 2014, U.S. EPA approved "*South Coast Extreme 1-Hour Ozone Attainment Demonstration and 1-Hour and 8-Hour VMT Offset Demonstrations"* of the 2012 AQMP.

TABLE 6-1

Federal Clean Air Act Requirements

Requirement	Federal CAA Section	Applicability				2016 AQMP
		2008 8-hr Ozone (Extreme)	2012 Annual PM2.5 (Moderate)	2012 Annual PM2.5 (Serious)	2006 24-hr PM2.5 (Serious)	
Emission Inventory	Subpart 1 §172(c)(3) Ozone - Subpart 2 182(a)(1)	✓	✓	✓	✓	Chapter 3 & Appendix III
Reasonably Available Control Measures (RACM)	Subpart 1 §172(c)(1) Ozone – Subpart 2 182(b)(2)	✓	✓			Appendix VI-A
Best Available Control Measures (BACM)	Subpart 4 §189(b)(1)(B)			✓	✓	Appendix VI-A
Control Strategy & Other Measures	Subpart 1 §172(c)(6)	✓	✓	✓	✓	Chapter 4, Appendix IV & Appendix VI-C
Attainment Demonstration	Ozone - Subpart 2 §182(c)(2)(A) & 182(e) PM - Subpart 4 §189(a)(1)(B) & §189(b)(1)(A)	✓		✓	✓	Chapter 5, Chapter 7 & Appendix V
Impracticability Demonstration	PM - Subpart 4 §189(a)(1)(B)		✓			Appendix VI-B
Reasonable Further Progress (RFP) & Milestones	Subpart 1 §172(c)(2) Ozone - Subpart 2 §182(c)(2)(B) & §182(g) PM - Subpart 4 §189(c)	✓	✓	✓	✓	Appendix VI-C
Contingency Measures	Subpart 1 §172(c)(9)	✓		✓	✓	Chapter 4 & Appendix IV
General Conformity	Subpart 1 §176(c)	✓	✓	✓	✓	Appendix VI-D
Transportation Conformity	Subpart 1 §176(c)	✓	✓	✓	✓	Appendix VI-D
Vehicle Miles Traveled (VMT) Offset	Subpart 2 §182(d)(1)(A)	✓	n/a*			Appendix VI-E
PM Precursors	Subpart 4 §189(e)		✓	✓	✓	Appendix VI-F
New Source Review (NSR)	Subpart 1 §172(c)(5) & §173; §182(e)(1&2) PM - Subpart 4 §189(b)(3)	✓	✓	✓	✓	Appendix VI-G

TABLE 6-1 (CONCLUDED)

Federal Clean Air Act Requirements

Requirement	Federal CAA Section	Applicability				2016 AQMP
		2008 8-hr Ozone (Extreme)	2012 Annual PM2.5 (Moderate)	2012 Annual PM2.5 (Serious)	2006 24-hr PM2.5 (Serious)	
Emissions Statements	Subpart 2 §182(a)(3)(B)	✓	n/a*			Chapter 6
Vehicle Inspection/Maintenance (I/M) Programs	Subpart 2 §182(b)(4) & Subpart 2 §182(c)(3)	✓	n/a*			Appendix IV-B
Clean Fuels Fleet Program	Subpart 2 §182(c)(4)	✓	n/a*			CARB motor vehicle program from prior SIP submittals
Clean Fuels for Boilers	Subpart 2 §182(e)(3)	✓	n/a*			SCAQMD Rule 2002 and Rule 1146
Transportation Control Measures during Heavy Traffic Hours	Subpart 2 §182(e)(4)	✓	n/a*			Appendix IV-C
Enhanced (Ambient) Monitoring	Subpart 2 §182(c)(1)	✓	n/a*			2016 Annual Air Quality Monitoring Network Plan, Chapter 2 & Appendix II
Transportation Controls	Subpart 2 §182(c)(5)	✓	n/a*			Appendix IV-B, Appendix IV-C & Appendix VI
NOx Requirements	Subpart 2 §182(f)	✓	n/a*			Appendix III, Appendix IV & Appendix VI
Penalty Fee Program Requirements	Subpart 2 §185	TBD	n/a*			-
Contingency Measures Associated with Areas Utilizing CAA §182(e)(5)	Subpart 2 §182(e)(5)	✓	n/a*			Chapter 4 and Appendix VI-C

* §182 or §185 requirements not applicable to PM

Table 6-2 provides the explanation of the different requirements and conclusions as to how the requirements are satisfied.

TABLE 6-2

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Emission Inventory	A comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutants in such area.	Annual average and summer planning emissions from all criteria pollutants from point, area, and mobile sources are provided in Chapter 3 and Appendix III for base year (2012) and attainment years for the ozone and PM standards.
Reasonably Available Control Measures (RACM)	Lowest emissions met with reasonably available (technical and economic feasibility) technology for mobile, area, and point sources, that can collectively advance the attainment date by at least one year. Does not include unenforceable or impractical measures.	Appendix VI-A contains analyses of all potential control measures for emission reduction opportunities, as well as economic and technological feasibility. The analyses concluded that the SCAQMD's rules and regulations were in general equivalent to, or more stringent than other districts' rules and regulations. For areas where improvements are possible, they are included as plan commitments or have been targeted for further evaluation.

TABLE 6-2 (CONTINUED)

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Best Available Control Measures (BACM)	The maximum degree of emission reductions achievable from a source or source category, considering energy, economic, and environmental impacts. They also need to advance the attainment date by at least one year. BACM is more stringent than RACM.	Appendix VI-A contains analyses of all potential control measures for emission reduction opportunities, as well as economic and technological feasibility. The analyses concluded that the SCAQMD's rules and regulations were in general equivalent to, or more stringent than other districts' rules and regulations. For areas where improvements are possible, they are included as plan commitments or have been targeted for further evaluation.
Control Strategy & Other Measures	Further emission reductions achieved from actions such as requiring air pollution control technologies and emission reduction programs.	Chapter 4 and Appendix IV provide the comprehensive control strategy that includes SCAQMD stationary and mobile measures, CARB mobile source and consumer product emission reductions, and federal actions.
Attainment Demonstration	Apply the proposed control strategy implemented as "expeditiously as practicable" to demonstrate attainment of standards based on photochemical grid modeling pursuant to U.S. EPA guidance.	Chapter 5 and Appendix V provide the attainment demonstration of the ozone standards by the statutory deadlines with the implementation of the control strategy. 24-hr PM2.5 levels will attain the standard with baseline emissions, and annual PM2.5 levels will meet the "serious" nonattainment deadline with implementation of the ozone control strategy

TABLE 6-2 (CONTINUED)

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Impracticability Demonstration	If "moderate" area PM attainment is demonstrated as impracticable, an area can request a reclassification to "serious" nonattainment, thus providing more time to comply, along with stricter requirements such as a BACM.	Appendix VI-B determines it is impracticable for the region meet the annual PM2.5 by the "moderate" nonattainment area deadline of 2021, even after implementing all feasible measures as expeditiously as practicable.
Reasonable Further Progress (RFP) & Milestones	Annual incremental reductions in emissions of relevant air pollutant(s) generally linear to the attainment year.	As shown in Appendix VI-C, baseline VOC emissions result in a shortfall of RFP, but substitution of baseline NOx reductions make up the shortfall. Baseline PM2.5 emissions project no shortfall for PM2.5 or precursors for each milestone year through the attainment year.
Contingency Measures	Additional measure to be implemented if area fails to meet RFP milestones or attainment date based on one-year's worth of reductions. Must be fully adopted and ready to implement.	Adequate contingency measures have been provided and are discussed in Chapter 4 and Appendix IV-A.
General Conformity	SIP must account for any federal action to determine if emissions increases are less than the de minimis thresholds for the relevant pollutants or precursors. If greater, then a positive conformity determination is needed.	General conformity budgets have been established in a set-aside account, along with a tracking system for federal actions to ensure conformity is being met. More details can be found in Appendix VI-D.
Transportation Conformity	Transportation plans and programs should not cause or contribute to any new violation of a standard, increase the frequency or severity of any existing violation, or delay the timely attainment of the air quality standards.	Motor vehicle emissions budgets have been established for the purpose of ensuring the conformity of transportation plans and programs. The budgets can be found in Appendix VI-D.

TABLE 6-2 (CONTINUED)

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Vehicle Miles Traveled (VMT) Offset	Requires offset of emission increases due to VMT. U.S. EPA allows vehicle technology improvements, motor vehicle fuels, and other transportation- related strategies to offset VMT.	Appendix VI-E demonstrates that emission increases from VMT growth is adequately offset by technology improvements and transportation strategies.
PM Precursors	Subpart 4 states control requirements for major stationary sources of PM also apply to major stationary sources of the precursors of PM unless the precursors do not significantly contribute to PM levels (CAA §189(e)).	As presented in Appendix VI-F, all four PM2.5 precursors, namely ammonia, NOx, SOx, and VOC, are considered in the evaluation of control measures. Data and analyses of the four PM2.5 precursors are included in various elements of the 2016 AQMP.
New Source Review (NSR)	A permitting requirement for new and modified major stationary sources.	SCAQMD's NSR program complies with ozone non-attainment requirements. Rule 1325 is currently being amended to include VOC and ammonia as PM2.5 precursors and to incorporate changes to the major source threshold for "serious" non-attainment areas.
Emissions Statements	Owner or operator of each stationary source of NOx or VOC provides statement for classes or categories of sources, showing the actual emissions of NOx and VOC from that source.	The SCAQMD satisfies this requirement through the approved SCAQMD Rule 301 paragraph (e)(2) that requires emission reporting from all major stationary sources of NOx and VOC greater than or equal to four tons per year.

TABLE 6-2 (CONTINUED)

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Vehicle I/M Program	The I/M regulations establish minimum performance standards for "basic" and "enhanced" I/M programs as well as various testing requirements.	Under California law, the Bureau of Automotive Repair (BAR) is responsible for developing and implementing the smog check program. On July 1, 2010, EPA approved California's inspection and maintenance program as meeting the requirements of the CAA (75 FR 38023). Details about proposed control measure of the smog check program can be found in Appendix IV-B.
Clean Fuels Fleet Program	Under Clean-Fuel Fleet (CFF) program, a specified percentage of vehicles purchased by fleet operators for covered fleets shall be clean-fuel vehicles and shall use clean alternative fuels when operating in the covered area.	CARB submitted its Low Emission Vehicle (LEV) program with enhancements as part of its 1994 ozone SIP on November 15, 1994. EPA approved the substitution of the LEV program for a Clean Fuel Fleet program into the California SIP on August 27, 1999 (64 FR 46849).
Clean Fuels for Boilers	Each new, modified, and existing electric utility and industrial and commercial boiler that emits more than 25 tons per year (tpy) of NOX to either burn as its primary fuel natural gas, methanol, or ethanol (or a comparably low polluting fuel), or use advanced control technology (such as catalytic control technology or other comparably effective control methods).	SCAQMD Rule 1146 and SCAQMD NOx RECLAIM program (Rule 2002) satisfy the requirements of CAA section 182(e)(3). Under SCAQMD Rule 1303, new or modified boiler emitting at least 10 tpy of NOx or VOC is required to employ Best Available Control Technology, which must be at least as stringent as the Lowest Achievable Emissions Rate (LAER) as defined in CAA section 171(3).
Transportation Control Measures during Heavy Traffic Hours	Provisions establishing traffic control measures applicable during heavy traffic hours to reduce the use of high polluting vehicles or heavy-duty vehicles	This is an optional requirement. Control measures regarding transportation control measure can be found in Appendix IV-C

TABLE 6-2 (CONCLUDED)

Requirements and Compliance Conclusions

Requirement	Clean Air Act Title I Part D Definition	Analysis
Transportation Controls	Submit a demonstration as to whether current aggregate vehicle mileage, aggregate vehicle emissions, congestion levels, and other relevant parameters are consistent with those used for the area's demonstration of attainment	Transportation controls for this AQMP can be found in Appendix IV-B and Appendix IV-C. Transportation conformity and VMT offset analysis can be found in Appendix VI-D and Appendix VI-E, respectively.
Enhanced (Ambient) Monitoring	Enhanced monitoring of ozone, oxides of nitrogen, and volatile organic compounds.	The SCAQMD's 2016 Annual Air Quality Monitoring Network Plan describes the steps taken to address the requirements of section 182(c)(1). It includes descriptions of the Photochemical Assessment Monitoring stations (PAMS) program. Monitoring data used for attainment demonstration and air quality modeling can be found in Chapter 2 and Appendix II.
NOx Requirements	Major stationary sources of NOx are subject to the provisions in Subpart 2 §182 (c), (d) & (e).	Emission inventory and control strategy for major stationary sources of NOx can be found in Appendix III and Appendix IV, respectively. Other requirements such as RACM/BACM demonstration and NSR can be found in Appendix VI.
Penalty Fee Program Requirements	Section 185 requires each major stationary source of VOC and NOx to pay an annual fee for emissions in excess of 80 percent of the emissions baseline if an area fails to attain the ozone standards by its applicable attainment date.	TBD
Contingency Measures Associated with Areas Utilizing CAA §182(e)(5)	Commitments to develop and adopt contingency measures to be implemented if the anticipated technologies as described in §182(e)(5) do not achieve planned reductions.	Contingency measures can be found in Chapter 4. Appendix VI-C describes the 3% emission reduction for contingency for the 2008 8-hour ozone standard.

As measures from the more recent ozone and PM standards continue to be implemented, the District anticipates that the revoked 1979 and 1997 ozone standards will be attained. While the 2016 AQMP strengthens its control strategies to address the 2008 8-hr ozone NAAQS, it also provides updated control strategies with new measures for NOx and VOC reductions, and attainment demonstrations for the revoked ozone standards. Chapter 5 demonstrates that the District will attain the revoked 1-hour ozone standard in 2022, and the revoked 1997 8-hour ozone standard in 2023, with implementation of the already adopted and proposed measures. More details on the attainment demonstration for the revoked 1979 1-hr ozone standard and the revoked 1997 8-hr ozone standard can be found in Appendix V. Table 6-3 summarizes the anti-backsliding provisions for the revoked ozone standards and the applicable documents that demonstrate that the District fulfilled such requirements.

TABLE 6-3

Anti-backsliding Requirements for Revoked Ozone Standards

	Compliance Demonstration	
Applicable Requirements (40 CFR, Subpart X, §51.1100)	**1-hour Standard**	**1997 8-hour Standard**
1) Reasonably Available Control Technology (RACT) (CAA §172(c)(1), §182(b)(2))	Appendix VII, 2012 AQMP	Appendix VI, 2007 AQMP
2) Vehicle Inspection/Maintenance (I/M) programs (CAA §182(b)(4), §182(c)(3))	Appendix VII, 2012 AQMP	Chapter 4/ Appendix IV-B, 2007 AQMP
3) Major source applicability cutoffs for purpose of RACT (CAA §172(c)(2), §182(b)(2), §182(b)(1)(A)(ii), §182(c), §182(d), §182(e), §182(f))	RACT Rules go below Major Source thresholds	
4) Reasonable Further Progress (RFP)/ Rate of Progress (ROP) reductions (CAA §172(c)(2), §182(b)(1)(A), §182(c)(2)(B))	2003 AQMP	Chapter 6, 2007 AQMP
5) Stage II vapor recovery[4]	2003 AQMP	n/a
6) Clean fuels fleet program (CAA §182(c)(4))	2003 AQMP	2007 AQMP
7) Clean fuels for boilers (CAA §182(e)(3))	2003 AQMP	2007 AQMP
8) Transportation control measures (TCMs) during heavy traffic hours (CAA §182(e)(4))	Appendix VII, 2012 AQMP	Chapter 4/ Appendix IV-C, 2007 AQMP
9) Enhanced (ambient) monitoring (CAA §182(c)(1))	Appendix VII, 2012 AQMP	Appendix V, 2007 AQMP
10) Transportation controls (CAA §182(c)(5))	Appendix VII, 2012 AQMP	Chapter 4/ Appendix IV-C, 2007 AQMP
11) Vehicle miles traveled provisions (CAA §182(d)(1)(A))	Appendix VIII, 2012 AQMP	Appendix VIII, 2012 AQMP
12) NOx requirements (CAA §182(f))	2003 AQMP	2007 AQMP

[4] Listed in 40 CFR, Subpart X, §51.900 but not in §51.1100.

TABLE 6-3 (CONCLUDED)

Anti-backsliding Requirements for Revoked Ozone Standards

Applicable Requirements (40 CFR, Subpart X, §51.1100)	**Compliance Demonstration**	
	1-hour Standard	**1997 8-hour Standard**
13) Attainment demonstrations (CAA §182(c)(2)(A), §189(a)(1)(B), §189(b)(1)(A))	Appendix VII, 2012 AQMP	Chapter 5/ Appendix V, 2007 AQMP
14) Nonattainment contingency measures (CAA §172(c)(9); §182(e)(5)) for failure to attain NAAQS or make RFP toward attainment	Appendix VII, 2012 AQMP	Chapter 9, 2007 AQMP
15) Nonattainment new source review (NSR) major source threshold and offset ratios (CAA §172(c)(5), §182(e)(3), §189(b)(3)) ("serious" PM)	SCAQMD Reg. XIII Rule 1325	SCAQMD Reg. XIII Rule 1325
16) Penalty fee program requirements for "severe" and "extreme" areas (CAA §185)	SCAQMD Rule 317	TBD
17) Contingency measures associated with areas utilizing CAA §182(e)(5)	Appendix VII, 2012 AQMP	Chapter 9, 2007 AQMP
18) Reasonably Available Control Measures (RACM) (CAA §172(c)(1), 189(a)(1)(C))[1]	Appendix VII, 2012 AQMP	Appendix VI, 2007 AQMP

California Clean Air Act Requirements

The Basin is designated as nonattainment with the state ambient air quality standards for PM10, PM2.5 and ozone. The CCAA requires that a plan for attaining the ozone standard be reviewed, and revised as necessary, every three years (Health & Safety Code § 40925). The Final 2016 AQMP satisfies this triennial update requirement. The CCAA established a number of legal mandates to facilitate achieving health-based state air quality standards at the earliest practicable date. The following CCAA requirements do not directly apply to particulate matter plans but are directed at ozone as described in the remainder of this chapter:

(1) Demonstrate attainment by the earliest practicable date (Health & Safety Code § 40913);

(2) Reduce nonattainment pollutants at a rate of 5 percent per year, or include all feasible measures and an expeditious adoption schedule (Health & Safety Code § 40914);

(3) Reduce population exposure to "severe" nonattainment pollutants according to a prescribed schedule (Health & Safety Code § 40920(c)); and

(4) Rank control measures by cost-effectiveness (Health & Safety Code § 40922).

Plan Effectiveness

The CCAA requires, beginning on December 31, 1994 and every three years thereafter, that the District assess its progress toward attainment of the State ambient air quality standards [Health & Safety Code § 40924(b)] and that this assessment be incorporated into the District's triennial plan revision. To demonstrate the effectiveness of the District's program, air quality trends since 1990 depicting maximum pollutant concentrations are provided in Figure 6-6. While this statute does not apply to particulate matter, it is useful to discuss progress towards attainment of the PM10 and PM2.5 standards. Basin annual average PM10 concentrations have decreased continuously since 1990 from a high of nearly 80 µg/m^3 to a 2015 level of 48.8 µg/m^3. PM2.5 annual concentrations have decreased by more than 50 percent since 1999 to a 2015 level of 13.3 µg/m^3. The State annual standards are 20 µg/m^3 and 12 µg/m^3 for PM10 and PM2.5, respectively.

One-hour ozone concentrations have decreased by more than 50 percent since 1990 to a 2015 level of 0.144 ppm. Eight-hour ozone concentrations have also decreased continuously from 1990 levels of 0.194 ppm to 2015 levels of 0.127 ppm. The State annual standards are 0.09 ppm and 0.07 ppm for 1-hour ozone and 8-hour ozone, respectively.

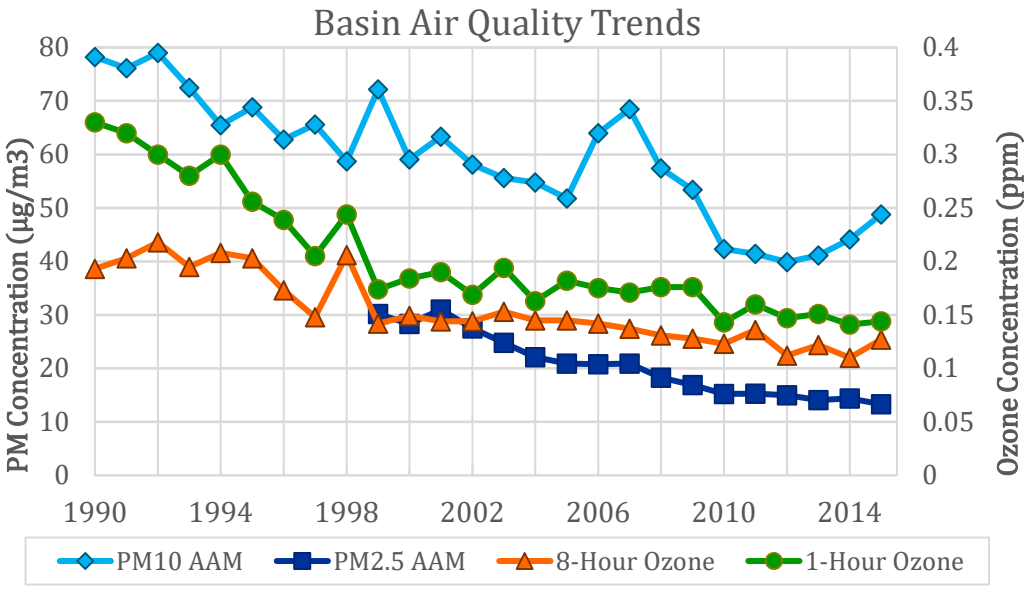

FIGURE 6-6

OZONE, PM10, AND PM2.5 TRENDS SINCE 1990

NO_2 and CO air quality have also improved substantially since 1990. NO_2 and CO metrics are not shown here since the Basin currently meets all State and federal NO_2 and CO standards. A comprehensive discussion of air quality trends was discussed in Chapter 2 and also can be found in Appendix II – Current Air Quality.

Emission Reductions

The CCAA requires that each district plan be designed to achieve a reduction in district-wide emissions of 5 percent or more per year for each covered nonattainment pollutant or its precursors, averaged every consecutive three-year period (Health & Safety Code § 40914). This requirement does not apply to PM. If this cannot be achieved, a plan may instead show that it has implemented all feasible measures as expeditiously as possible (Health & Safety Code § 40914(b)). Nevertheless, all feasible measures should be implemented for particulate matter in order to assure attainment as expeditiously as practicable.

The baseline NOx emissions meet the five percent averaged every consecutive three-year average reductions up to 2026 (see Appendix III for emission inventory values). As the NOx reduction strategy is being implemented, corresponding VOC and PM2.5 emissions are also expected to be reduced. As discussed in the RACM / RACT and BACM / BACT analysis in Appendix VI, this Plan implements all available feasible measures as expeditiously as possible.

Population Exposure

The CCAA also requires a reduction in overall population exposure to criteria pollutants. Reductions are to be calculated based on per-capita exposure and the severity of the exceedances. For the Basin, this provision is applicable to ozone [Health & Safety Code § 40920(c)]. The definition of exposure is the number of persons exposed to a specific pollutant concentration level above the State standard times the number of hours exposed. The per-capita exposure is the population exposure (units of parts per hundred million (pphm)-person-hours) divided by the total population. This requirement for the specific milestone years listed in the CCAA has been shown to have already been satisfied in previous AQMPs.

Cost-Effectiveness Ranking

The CCAA requires that each plan revision include an assessment of the cost-effectiveness of available and proposed control measures and contain a list which ranks the control measures from the most cost-effective to the least cost-effective (Health & Safety Code § 40922). Table 6-4 provides a list of stationary source control measures for the annual PM2.5 standard ranked by cost-effectiveness. Tables 6-5 and 6-6 provide lists of SCAQMD stationary and mobile source control measures, respectively, for ozone ranked by cost-effectiveness, and Table 6-7 ranks the CARB strategy measures.

In developing an adoption and implementation schedule for a specific control measure, a district shall consider the relative cost-effectiveness of the measure as well as other factors including, but not limited to, technological feasibility, total emission reduction potential, the rate of reduction, public acceptability, and enforceability (Health & Safety Code § 40922). These requirements do not apply to particulate matter, but provide a useful framework for evaluation. The PM2.5/ozone control strategy and implementation schedule is provided in Chapter 4.

TABLE 6-4

Cost-Effectiveness Ranking of District's Stationary Source Control Measures for PM2.5 [a,b]

MEASURE NUMBER	DESCRIPTION	DOLLARS/TON[c]	RANKING BY COST-EFFECTIVENESS
BCM-01	Further Emission Reductions from Commercial Cooking [PM]	$15,000–$18,000/ton	1
BCM-04	Emission Reductions from Manure Management Strategies [NH3]	$15,000/ton	2
BCM-10	Emission Reductions from Greenwaste Composting [VOC, NH3]	$61,500/ton	3
BCM-08	Further Emission Reductions from Agricultural, Prescribed, and Training Burning [PM]	TBD - Minimal	4
BCM-09	Further Emission Reductions from Wood-Burning Fireplaces and Wood Stoves [PM]	TBD - Minimal	4
BCM-02	Emission Reductions from Cooling Towers [PM]	TBD[d]	6
BCM-03	Further Emission Reductions from Paved Road Dust Sources [PM]	TBD[d]	6
BCM-05	Ammonia Emission Reductions from NOx Controls [NH3]	TBD[d]	6
BCM-06	Emission Reductions from Abrasive Blasting Operations [PM]	TBD[d]	6
BCM-07	Emission Reductions from Stone Grinding, Cutting and Polishing Operations [PM]	TBD[d]	6

[a] The cost-effectiveness values of these measures are based on the Discount Cash Flow methodology and 4 percent real interest rate

[b] Where a range exists, the ranking was done based on the low end of the range

[c] Preliminary estimate, actual cost-effectiveness will be determined by the Phase I technology assessment

[d] TBD – emission reductions and costs to be determined once the inventory and control approach are identified

TABLE 6-5

Cost-Effectiveness Ranking of Stationary Source Control Measures for Ozone [a,b]

MEASURE NUMBER	DESCRIPTION	DOLLARS/TON[c]	RANKING BY COST-EFFECTIVENESS
ECC-01	Co-Benefit Emission Reductions from GHG Programs, Policies, and Incentives [All Pollutants]	Marginal	1
ECC-02	Co-Benefits from Existing Residential and Commercial Building Energy Efficiency Measures [NOx, VOC]	Marginal; short payback period	1
BCM-10	Emission Reductions from Greenwaste Composting [VOC, NH3]	$3,400/ton	3
FUG-01	Improved Leak Detection and Repair [VOC]	$4,000–$5,000/ton	4
CTS-01	Further Emission Reductions from Coating, Solvents, Adhesives, and Sealants [VOC]	$8,000–$12,000/ton	5
CMB-05	Further NOx Reductions from RECLAIM Assessment [NOx]	$13,500–$21,000/ton	6
CMB-04	Emission Reductions from Restaurant Burners and Residential Cooking [NOx]	$15,000–$30,000/ton	7
CMB-02	Emission Reductions from Replacement with Zero or Near-Zero NOx Applications in Commercial and Residential Applications [NOx]	$15,000–$30,000/ton	7
CMB-03	Emission Reductions from Non-Refinery Flares [NOx, VOC]	< $20,000/ton	9
ECC-03	Additional Enhancements in Reducing Existing Residential Building Energy Use [NOx, VOC]	$45,000–$50,000/ton	10
CMB-01	Transition to Zero and Near-Zero Emission Technologies for Stationary Sources [NOx, VOC]	$53,000/ton	11
ECC-04	Reduced Ozone Formation and Emission Reductions from Cool Roof Technology [All Pollutants]	TBD[c] - Marginal	12
MCS-02	Application of All Feasible Measures [All Pollutants]	TBD[c]	13
FLX-01	Improved Education and Public Outreach [All Pollutants]	N/A[d]	14
FLX-02	Stationary Source VOC Incentives [VOC]	N/A[d]	14
MCS-01	Improved Breakdown Procedures and Process Re-Design [All Pollutants]	N/A[d]	14

[a] The cost-effectiveness values of these measures are based on the Discount Cash Flow methodology and 4 percent real interest rate

[b] Where a range exists, the ranking was done based on the low end of the range

[c] TBD – emission reductions and costs to be determined once the inventory and control approach are identified

[d] N/A – emission reductions and costs cannot be quantified due to the nature of the measure (e.g., outreach) or the early stage in development

TABLE 6-6
Cost-Effectiveness Ranking of Mobile Source Control Measures for Ozone

MEASURE NUMBER	DESCRIPTION	DOLLARS/TON[a]	RANKING BY COST-EFFECTIVENESS
MOB-11	Extended Exchange Program [VOC, NOx, CO]	$800–$10,000/ton	1
MOB-10	Extension of the SOON Provision for Construction/Industrial Equipment [NOx]	$11,300/ton	2
MOB-12	Further Emission Reductions from Passenger Locomotives [NOx, PM]	$15,000/ton	3
MOB-14	Emission Reductions from Incentive Programs [NOx, PM]	$18,262/ton	4
EGM-01	Emission Reductions from New Development and Redevelopment Projects [All Pollutants]	TBD[a]	5
MOB-01	Emission Reductions at Commercial Marine Ports [NOx, SOx, PM]	TBD[a]	5
MOB-02	Emission Reductions at Rail Yards and Intermodal Facilities [NOx, PM]	TBD[a]	5
MOB-03	Emission Reductions at Warehouse Distribution Centers [All Pollutants]	TBD[a]	5
MOB-04	Emission Reductions at Commercial Airports [All Pollutants]	TBD[a]	5
MOB-05	Accelerated Penetration of Partial Zero-Emission and Zero-Emission Vehicles [VOC, NOx, CO]	TBD[a]	5
MOB-06	Accelerated Retirement of Older Light-Duty and Medium-Duty Vehicles [VOC, NOx, CO]	TBD[a]	5
MOB-07	Accelerated Penetration of Partial Zero-Mission and Zero-Emission Light-Heavy- and Medium-Heavy-Duty Vehicles [NOx, PM]	TBD[a]	5
MOB-08	Accelerated Retirement of Older On-Road Heavy-Duty Vehicles [NOx, PM]	TBD[a]	5
MOB-09	On-Road Mobile Source Emission Reduction Credit Generation Program [NOx, PM]	TBD[a]	5
MOB-13	Off-Road Mobile Source Emission Reduction Credit Generation Program [NOx, SOx, PM]	TBD[a]	5

[a] Emission reductions and costs will be determined after projects are identified and implemented. See Appendix IV-A for cost information for specific measures

TABLE 6-7

Cost-Effectiveness Ranking of CARB Mobile Source Control Measures for Ozone [a]

CARB's MEASURE DESCRIPTION	DOLLARS/TON[a,b]	RANKING BY COST-EFFECTIVENESS
Advanced Clean Cars 2	TBD[a]	N/A
Lower In-Use Emission Performance Assessment	TBD[a]	N/A
Further Deployment of Cleaner Technologies	TBD[a]	N/A
Lower In-Use Emission Performance Level	TBD[a]	N/A
Low-NOx Engine Standard – California Action	TBD[a]	N/A
Low-NOx Engine Standard – Federal Action	TBD[a]	N/A
Medium and Heavy-Duty GHG Phase 2	TBD[a]	N/A
Innovative Clean Transit	TBD[a]	N/A
Last Mile Delivery	TBD[a]	N/A
Lower In-Use Emission Performance Level	TBD[a]	N/A
Low-NOx Engine Standard – California Action	TBD[a]	N/A
Low-NOx Engine Standard – Federal Action	TBD[a]	N/A
Medium and Heavy-Duty GHG Phase 2	TBD[a]	N/A
Further Deployment of Cleaner Technologies	TBD[a]	N/A
More Stringent National Locomotive Emission Standards	TBD[a]	N/A
Further Deployment of Cleaner Technologies	TBD[a]	N/A
Tier 4 Vessel Standards	TBD[a]	N/A
Incentivize Low Emission Efficient Ship Visits	TBD[a]	N/A
At-Berth Regulation Amendments	TBD[a]	N/A
Further Deployment of Cleaner Technologies	TBD[a]	N/A
Zero-Emission Off-Road Forklift Regulation Phase 1	TBD[a]	N/A
Zero-Emission Off-Road Emission Reduction Assessment	TBD[a]	N/A
Zero-Emission Off-Road Worksite Emission Reduction Assessment	TBD[a]	N/A
Zero-Emission Airport Ground Support Equipment	TBD[a]	N/A
Small Off-Road Engines	TBD[a]	N/A
Transport Refrigeration Units Used for Cold Storage	TBD[a]	N/A
Low-Emission Diesel Requirement	TBD[a]	N/A
Further Deployment of Cleaner Technologies	TBD[a]	N/A
Consumer Products Program	TBD[a]	N/A

[a] Emission reductions and costs will be determined after projects are identified and implemented

[b] Where a range exists, the ranking was done based on the low end of the range

Conclusion

As provided in Table 6-2, all federal CAA requirements are satisfied and demonstrated in the 2016 AQMP. Many of the details showing compliance are provided in Appendix VI of this Plan and are listed in both Tables 6-1 and 6-2. Compliance with anti-backsliding requirements for the revoked standards are listed in Table 6-3. While the requirements have been satisfied in existing rules, regulations and previous AQMPs, some analyses have been updated in the 2016 AQMP. For example, a new attainment demonstration performed for the revoked 1-hour ozone standard was adopted in 2012 to respond to a U.S. EPA SIP call and is being updated in the 2016 AQMP to reflect new information and the new control strategy developed to meet the 8-hour ozone standards.