

# Staff Report

## CARB Review of the 2020 Coachella Valley Extreme 8-hour Ozone State Implementation Plan

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CARB staff has prepared a written report reviewing the District Plan. Copies of the report may be obtained from CARB's website at [South Coast Air Quality Plans](#). The report may also be obtained from CARB's Public Information Office, 1001 I Street, First Floor, Environmental Services Center, Sacramento, California, 95814, on October 16, 2020. However, because of current travel, facility, and staffing restrictions, CARB's office may have limited public access. If you need physical copies of the report, please contact Scott King, Air Pollution Specialist, at [scott.king@arb.ca.gov](mailto:scott.king@arb.ca.gov), or (916) 322-2832.

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## I. EXECUTIVE SUMMARY

On June 4, 2010, the United States Environmental Protection Agency (U.S. EPA) designated the Coachella Valley as a nonattainment area for the 80 parts per billion (ppb) 8-hour National Ambient Air Quality Standard (standard) for ozone<sup>1</sup>, with a classification of Severe, and an attainment deadline of June 15, 2019. While ozone levels in Coachella Valley have decreased significantly over the past two decades, the Coachella Valley nevertheless did not attain the 80 ppb 8-hour ozone standard by the June 2019 deadline, due to unfavorable atmospheric conditions in 2017 and 2018.

On June 11, 2019, the California Air Resources Board (CARB or the Board) submitted a request to U.S. EPA to reclassify the Coachella Valley from a Severe nonattainment area to an Extreme nonattainment area for the 80 ppb 8-hour ozone standard, which would provide a new attainment deadline of June 15, 2024. The Clean Air Act (the Act) allows for states to request a voluntary bump-up to the next classification. By requesting a reclassification to a higher classification, the Coachella Valley would receive additional time to attain the standard, but would also have to implement more stringent controls on an increasing number of sources of pollution in the area, as is required with an Extreme classification. On July 10, 2019, U.S. EPA classified the Coachella Valley as an Extreme area for the 80 ppb 8-hour ozone standard<sup>2</sup>. As a result of the new classification, California is required to submit a new SIP by February 14, 2021. The Coachella Extreme SIP must demonstrate that the Coachella Valley can attain the standard by June 15, 2024, and must include additional Clean Air Act requirements for Extreme ozone nonattainment areas.

The South Coast Air Quality Management District (District) is responsible for air quality planning for both the Coachella Valley and the South Coast Air Basin (Basin). The District developed the Coachella Valley Extreme Area Plan (Plan), which demonstrates attainment by the 2024 deadline and addresses other Extreme area requirements. The Plan includes an updated emissions inventory, modeling analysis demonstrating attainment, control strategies that provide the emission reductions needed for attainment, a Reasonable Further Progress (RFP) demonstration, contingency measures needed in the event of a failure to attain or failure to meet an RFP milestone, and other elements necessary for an Extreme ozone nonattainment area.

Based on the updated inventory and modeling analysis included in this Plan, the District demonstrated that the Coachella Valley will attain the standard in 2023, the first complete ozone season prior to the attainment date. The control strategy in the Plan needed to provide the reductions for attainment relies on the continued implementation of existing regulations by the District and CARB. These already adopted regulations will reduce ozone precursor emissions, specifically providing the reductions in emissions of oxides of nitrogen (NO<sub>x</sub>) that the modeling demonstrates are needed for attainment.

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<sup>1</sup> 75 FR 24409 (June 4 2010)

<sup>2</sup> 84 FR 50760 (September 26, 2019)

The Plan also includes a demonstration that the threshold for defining emission sources of NO<sub>x</sub> and reactive organic gases (ROG) as 'major sources' is lowered to 10 tons per year (tpy), satisfying both Reasonably Available Control Technology (RACT) and New Source Review (NSR) requirements.

The District Board is scheduled to consider approval of the Plan on December 4, 2020.

## II. BACKGROUND

On July 18, 1997, U.S. EPA revised the ozone standard from a 1-hour average ozone standard of 120 ppb to an 8-hour averaged ozone standard of 80 ppb<sup>3</sup>. The Coachella Valley was originally classified as a Serious nonattainment area.<sup>4</sup> On June 4, 2010, U.S. EPA reclassified the Coachella Valley nonattainment area from Serious to Severe, which established an attainment date of June 15, 2019.<sup>5</sup>

Due to the successful NO<sub>x</sub> and ROG emission control programs in the Coachella Valley and in the neighboring South Coast Air Basin (Basin),<sup>6</sup> the 8-hour ozone design values and annual days over the standard in the Coachella Valley have decreased significantly in the past two decades. In fact, the Coachella Valley appeared to be on course to meet the standard by the attainment date until 2017. Figure 1 demonstrates that design values and exceedance days were decreasing in the Coachella Valley until 2017.

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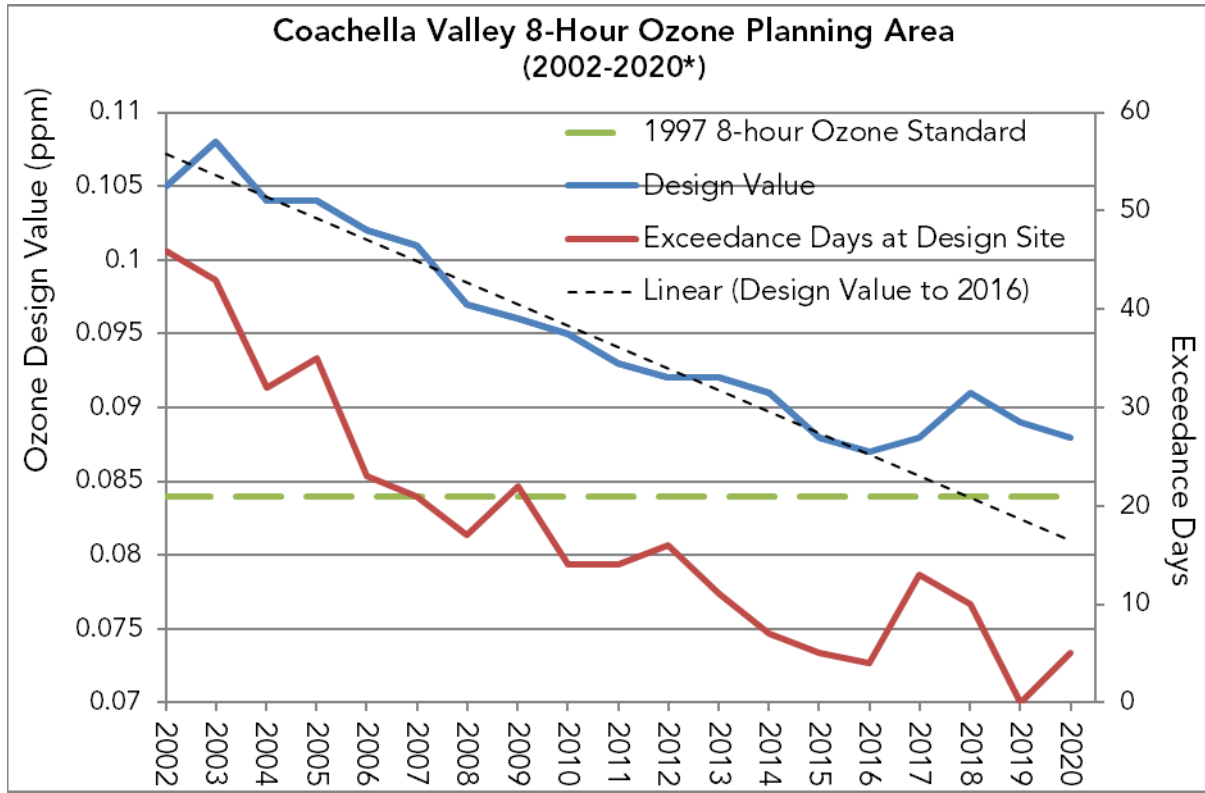
<sup>3</sup>62 FR 38856 (July 1997)

<sup>4</sup>69 FR 23858 (April 30, 2004).

<sup>5</sup>75 FR 24409 (May 5, 2010).

<sup>6</sup>Transport of emissions from the South Coast Air Basin significantly impacts the levels of ozone in the Coachella Valley.

Figure 1: Coachella Valley 8-hour ozone DV and exceedance days from 2002 to 2020



\*2020 values are draft and subject to change

Figure 1 also shows that, using a linear forecast based on Design Values from 2002 to 2016 (represented in Figure 1 as the black dashed line), the data predicted attainment in 2018. In 2017 and 2018, however, the Coachella Valley – along with the Basin and much of the western United States – experienced several high ozone days, primarily driven by episodes of unusually warm and stagnant weather conditions. Ozone levels in 2017 and 2018 not only diverged from the decade-long trend of decreasing design values and exceedance days, but they were also significantly higher than previous years, and therefore resulted in the Coachella Valley not attaining the 80 ppb 8-hour standard by the attainment deadline.

As Coachella Valley did not attain the standard in 2018, on June 7, 2019, the District requested that CARB request U.S. EPA to have the Coachella Valley reclassified as Extreme for the standard. On June 11, 2019, CARB submitted the District request to U.S. EPA and, effective July 10, 2019, the U.S. EPA approved the request.<sup>7</sup> The reclassification to Extreme results in an attainment date of June 15, 2024, thereby requiring that the District demonstrate attainment of the standard in the Coachella Valley in 2023.

<sup>7</sup>84 FR 32841 (July 10, 2019)

### **III. CLEAN AIR ACT REQUIREMENTS**

On February 14, 2020, U.S. EPA established the Extreme area submission requirements for the Coachella Valley Extreme Plan along with the deadline for submitting the SIP, one year from the date of that final rulemaking. The State shall submit a SIP revision for the Coachella Valley that addresses the section 182(e) requirements of the Act, including, but not limited to the following:

- 1) An attainment demonstration showing attainment of the standard as expeditiously as practicable but no later than June 15, 2024;
- 2) A RFP demonstration showing ozone precursor reductions of at least 3 percent per year until the attainment date;
- 3) Additional RACT rules to address sources subject to the lower extreme area major source threshold;
- 4) The use of clean fuels or advanced control technology for boilers as described at section 182(e)(3) of the Act; and
- 5) Contingency measures in the event that the Coachella Valley fails to meet RFP or attainment.

In addition to these requirements, the State must submit revised NSR rules for the Coachella Valley that reflect the Extreme area definitions for new major sources and modifications, as well as increase the offset ratios for these sources, consistent with the Act section 182(e)(1) and (2). And finally, Act section 182(d)(1)(A) requires a demonstration that emissions in 2023 caused by the growth in vehicle miles traveled (VMT) are offset by transportation control strategies (TCSs) and transportation control measures (TCMs). The VMT offset demonstration will be submitted at later date.

#### **A. Emission Inventory**

Chapter 3 of the Plan addresses the emissions inventory in the Coachella Valley for the base year, 2018, and forecasted attainment year of 2023. The emissions inventory includes the ozone precursor emissions of NO<sub>x</sub> and ROG. Baseline emissions data for each year reflect emission reductions from currently adopted programs, and are based on the seasonally adjusted summer planning inventory emissions. The baseline emissions are used for the ozone modeling attainment demonstrations, and to report emission reduction progress as required by the Act.



## **B. Attainment Demonstration**

Chapter 4 of the Plan describes the control strategy to meet the standard in the Coachella Valley. The control strategy to show attainment of the standard is based on the continued implementation of existing District and CARB regulations and programs over the next few years. The control strategy focuses on reducing NO<sub>x</sub> emissions, as NO<sub>x</sub> emission reduction were demonstrated in the 2016 Air Quality Management Plan<sup>8</sup> (2016 AQMP) as the most effective strategy to attain the 8-hour ozone standards in the both the Basin and the Coachella Valley.

Since the 80 ppb 8-hour ozone standard was promulgated, significant NO<sub>x</sub> controls have been implemented at the State and District level. As a result, the Coachella Valley is close to attaining the standard, and emission reductions from the continued implementation of existing State and District regulations are predicted to provide the reductions for attainment of the standard in 2023.

### **i. Modeled Attainment**

Chapter 5 of the Plan describes the air quality modeling analysis and attainment demonstration. In the District attainment demonstration, ozone concentrations were simulated for the 2018 base year and the future attainment year of 2023 to demonstrate that the Coachella Valley can attain the 80 ppb 8-hour ozone standard in 2023 through on-going implementation of existing control programs. Since the transport of ozone and its precursors from the Basin has been shown to be cause of high ozone in the Coachella Valley, NO<sub>x</sub> reductions in the Basin will provide significant benefits for ozone air quality in the Coachella Valley.

## **C. Reasonable Further Progress**

Section 172(c)(2) of the Act requires that nonattainment areas demonstrate that they will achieve annual emission reductions through the attainment year for the standard. For Extreme ozone nonattainment areas, Section 182(c)(2)(B) of the Act specifies that ozone nonattainment areas must demonstrate RFP, or annual emission reductions of three percent averaged over 3-year periods, from the base year through the attainment year.

The 2007 Air Quality Management Plan demonstrated that Coachella Valley met RFP for 2017 and earlier years; therefore, the Plan is only required to demonstrate RFP for the milestone year of 2020 and the attainment year of 2023. The baseline year for RFP in the 80 ppb 8-hour ozone standard is 2002.

Tables 6-1 and 6-2 in the Plan summarize the RFP calculations for ROG and NO<sub>x</sub>, respectively. In the 2020 milestone year, the three percent reduction per year is met

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<sup>8</sup>[South Coast 2016 AQMP](#)

based on existing regulatory programs, using a combination of ROG and NOx reductions.

#### **D. Reasonably Available Control Technology**

The Act requires ozone nonattainment areas to develop and submit a demonstration that their current air pollution controls and emissions sources fulfill the RACT requirements for all “major sources” in the area. The definition of what constitutes a major source, however, varies depending on the severity of the classification. For an Extreme area, the threshold for defining a stationary source as a major source (i.e. a source that must be controlled under a regulatory method) is 10 tpy of ROG or NOx emissions. Under the area’s previous Severe classification, fewer facilities were included in this category, as the threshold for a major source was defined as a facility emitting 25 tpy or more of ROG or NOx emissions.

As a requirement for the 70 ppb 8-hour ozone standard, a RACT demonstration was required to be submitted to U.S. EPA by August 3, 2020. In 2020, a RACT Demonstration was conducted by the District for the Coachella Valley, based on the area’s Severe nonattainment classification for the 70 ppb standard.<sup>9</sup> The 2020 RACT Demonstration addressed both Control Techniques Guidelines (CTG) and non-CTG major sources<sup>10</sup> in the Coachella Valley for facilities emitting 25 tpy or more of ROG or NOx. The 2020 RACT Demonstration concluded that the District’s rules for major sources in the Coachella Valley meet or exceed the RACT requirements for a Severe area. The 2020 RACT Demonstration was submitted to the U.S. EPA for inclusion into the SIP in August 2020.

To demonstrate that the Coachella Valley also met the more stringent extreme RACT requirements applying to facilities emitting 10 or more tpy of ROG or NOx emissions, the District performed a supplemental RACT analysis of stationary sources in Coachella Valley. The Supplemental RACT Demonstration analyzed facilities in the Coachella Valley with a potential to emit (PTE) between 10 and 25 tpy of ROG or NOx emissions, as well as the rules and regulations adopted in other air agencies from March 2020 to June 2020. The applicable District ROG and NOx rules in the Coachella Valley meet RACT and are as stringent as, or more stringent than, other districts’ rules; in addition, stationary sources with a PTE of 10 to 25 tpy were found to be meeting RACT levels of control.

#### **E. RACM Demonstration**

In addition to the RACT requirement demonstrating that stationary sources in the area are covered by appropriate controls, the Act also requires that Extreme nonattainment

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<sup>9</sup>Draft Final Staff Report for 2015 8-Hour Ozone Standard Reasonably Available Control Technology (RACT) Demonstration, South Coast AQMD, May 2020.

<sup>10</sup>Major sources that are not covered by the U.S. EPA CTGs are called non-CTG major sources.

areas demonstrate that Reasonably Available Control Measures (RACM) are implemented on all sources of emissions.

The RACM demonstration is required as part of the attainment plan. It includes:

- RACT for stationary sources; and
- Measures for mobile and areawide sources that require the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available, considering technological and economic feasibility.<sup>11</sup>

To meet RACM, states must consider all available control measures that are economically and technologically feasible and being implemented in other areas, and which will advance the attainment date by a year, or are necessary for RFP.

The Plan included a RACM demonstration built upon the 2016 AQMP RACM Demonstration and the 2020 RACT Demonstration. The Plan's RACM demonstration evaluated District measures for stationary sources, CARB measures on mobile and area sources, and transportation control strategies (TCSs) and transportation control measures (TCMs). The RACM demonstration determined that District and CARB rules and regulations for stationary, mobile and area sources in addition to TCSs and TCMs meet RACM requirements for Coachella Valley as an Extreme ozone nonattainment area.

#### **F. Clean Fuels or Advanced Control Technologies for Boilers**

Section 182(e)(3) of the Act requires new, modified, and existing electric utility and industrial and commercial boiler that emits more than 25 tpy of NO<sub>x</sub> to burn a low-polluting fuel or use advanced NO<sub>x</sub> control technology. In Coachella Valley, existing boilers are currently subject to District rules, which reflect Best Available Retrofit Control Technology (BARCT) for existing equipment. New or modified sources with emission increases are also subject to California Best Available Control Technology (California BACT), or federal lowest achievable emission rate in the case of major sources. Therefore, the implementation of existing California BARCT and BACT meet the requirements of section 182(e)(3) of the Act.

#### **G. Clean Fuels Fleet Program**

Sections 182(c)(4) and 246 of the Act require California to implement a Clean Fuels Fleet (CFF) program or opt-out of the CFF program by submitting a program or programs that will result in at least equivalent long-term reductions in ozone precursors and toxic air emissions. In 1994, CARB submitted a SIP revision to U.S. EPA to opt-out of the CFF program.<sup>12</sup> The submittal included a demonstration that California's low-emissions vehicle (LEV) program achieved emissions reductions at least

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<sup>11</sup>44 FR 53762 (September 17, 1979).

<sup>12</sup>1994 California State Implementation Plan volume II, and CARB Executive Order G-125- 145

equivalent to the reductions that would be achieved by the CFF program. U.S. EPA approved the California SIP revision to opt-out of a CFF program effective September 27, 1999.<sup>13</sup>

## H. Contingency Measures

Sections 172(c)(9) and 182(c)(9) of the Act require contingency measures to be in place in the event that an ozone nonattainment area fails to meet the RFP milestones or attain the standard by the attainment date. To meet the contingency requirement in the Coachella Valley, the District will amend Rule 445, Wood-Burning Devices, to include the contingency provisions in the Coachella Valley. The Proposed Amended Rule 445 is tentatively scheduled to be considered at the Governing Board Hearing in December 2020.

## I. Offset Requirements

Sections 182(e)(1) and (2) of the Act requires that new or modified stationary sources in an Extreme ozone area offset additional emissions of ROG at a ratio of 1.5 to 1 of total emission reductions to total increased of each air pollutant, unless federal BACT) is required for new or modified existing major sources. The Federal NSR requirements are reflected in District Regulation XIII - New Source Review. Since BACT is implemented for major and non-major sources, an offset ratio of 1.2 to 1 is appropriate for NSR offset requirements. The District's NSR already include these requirements for ROG and NOx sources; however, amendments are proposed to existing Regulation XIII provisions to change the offset ratio for carbon monoxide from 1 to 1 in the Coachella Valley, to 1.2 to 1, making it consistent with the Basin.

## IV. ENVIRONMENTAL IMPACTS

The California Environmental Quality Act (CEQA) requires that State and local agency projects be assessed for potential environmental impacts. An air quality plan may be a "project" that is potentially subject to CEQA requirements. The District found that the proposed Plan will not result in any potentially significant adverse effects on the environment and is exempt from CEQA pursuant to CEQA Guidelines Sections 15061(b)(3) and 15308. The District will file a Notice of Exemption upon approval of the Plan by its Governing Board at its public hearing in December 2020.

CARB has determined that the proposed Plan is a ministerial activity by CARB for purposes of CEQA (14 CCR § 15268). A "ministerial" decision is one that involves fixed standards or objective measurements, and the agency has no discretion to shape the activity in response to environmental concerns (14 CCR § 15369; *San Diego Navy Broadway Complex Coalition v. City of San Diego* (2010) 185 Cal.App.4th 924, 934).

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<sup>13</sup>Federal Register /Vol. 64, No. 166/Friday, August 27, 1999/Rules and Regulations, 46849

Because CARB lacks authority to modify a SIP submittal that fully complies with Act requirements, its action here is ministerial.

Furthermore, CARB has determined that the proposed Plan is not a "project" subject to CEQA because CARB's approval simply acknowledges requirements that are already binding and enforceable. CARB's approval and submission of these requirements to the U.S. EPA does not repeal or revise these requirements, and would thus not cause a substantial change to the environment requiring additional environmental review. (See *Sherwin-Williams Co. v SCAQMD* (2001) 86 Cal.App.4th 1258, 1286.)

## **V. CONCLUSION**

CARB staff has concluded that the Coachella Valley Extreme Area Plan for the 80 ppb 8-Hour Ozone Standard meets the SIP planning requirements of the Act for an Extreme ozone 8-hour nonattainment area.

## **VI. STAFF RECOMMENDATIONS**

CARB staff recommends that the Board:

1. Adopt the Coachella Valley Extreme Area Plan for the 80 ppb 8-hour ozone standard, including the emission inventories, attainment demonstration, RACT and RACM demonstration, RFP demonstration, contingency measures, and RFP milestones, as a revision to the California SIP.
2. Direct the Executive Officer to submit the Plan to U.S. EPA as a revision to the California SIP.