

**Revision to the Nevada State Implementation
Plan for the 2015 Ozone NAAQS:
Emissions Inventory and Emissions Statement
Requirements**

**Las Vegas Valley Nonattainment Area
Clark County, Nevada**

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EXECUTIVE SUMMARY

This state implementation plan (SIP) revision is submitted by the Clark County Department of Environment and Sustainability, formerly the Clark County Department of Air Quality, for inclusion in the Nevada SIP for the 2015 ozone National Ambient Air Quality Standard (NAAQS). It is intended to satisfy certain planning requirements for the Las Vegas Valley nonattainment area for the 2015 ozone standard.

On October 1, 2015, the U.S. Environmental Protection Agency (EPA) revised the 8-hour ozone NAAQS, lowering both the primary and secondary standards from 0.075 to 0.070 parts per million. When EPA establishes a new NAAQS or revises an existing one, it must designate areas as meeting (attainment) or not meeting (nonattainment) the standard. Under the Clean Air Act, states are required to develop SIPs that outline how they will attain or maintain the NAAQS following designation. The Las Vegas Valley was designated as a marginal nonattainment area for the 2015 ozone standard effective August 3, 2018.

This document addresses the emissions inventory and emissions statement requirements established in the Clean Air Act and final implementation rule¹ for the 2015 ozone NAAQS for the Las Vegas Valley nonattainment area.

¹ 83 FR 62998. "Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements. Final rule." December 6, 2018.

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ACRONYMS AND ABBREVIATIONS

Acronyms

AQR	Clark County Air Quality Regulations
BCC	Clark County Board of County Commissioners
CAA	Clean Air Act
CFR	Code of Federal Regulations
DES	Clark County Department of Environment and Sustainability
EI	emissions inventory
EPA	U.S. Environmental Protection Agency
ES	emissions statement
FR	<i>Federal Register</i>
HA	hydrographic area
NAAQS	National Ambient Air Quality Standards
NDEP	Nevada Division of Environmental Protection
SIP	State Implementation Plan

Abbreviations

NO _x	nitrogen oxides
tpd	tons per day
VOC	volatile organic compound

1.0 INTRODUCTION

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) to protect public health from six common air pollutants, including ozone. On October 1, 2015, EPA revised the 8-hour ozone NAAQS, lowering the primary (health-based) and secondary (welfare-based) standards from 0.075 to 0.070 parts per million. When EPA establishes a new NAAQS or revises an existing one, it must designate areas as meeting or not meeting the standard; states must then develop state implementation plans (SIP) that describe how these areas will attain or maintain the standard. SIP requirements depend on the EPA's designation.

1.1 PURPOSE

This SIP submittal is intended to satisfy specific nonattainment area planning requirements established in the CAA and in the final implementation rule for the 2015 ozone NAAQS in volume 83, page 62998 of the *Federal Register* (83 FR 62998). On June 4, 2018, the Las Vegas Valley was designated as a marginal nonattainment area for the 2015 ozone NAAQS effective August 3, 2018 (83 FR 25776). Under the final implementation rule, requirements for marginal nonattainment areas include the submittal of a base year emissions inventory (EI) and the implementation or certification of both adequate emissions statement (ES) and nonattainment new source review programs. This document addresses the EI and ES requirements for the Las Vegas Valley nonattainment area.

1.2 BACKGROUND

1.2.1 Designation History

In September 2016, the Nevada Division of Environmental Protection (NDEP) submitted its designation recommendations for the revised 2015 ozone standard. This submittal included Clark County's *Area Designation Recommendations for the 2015 Ozone NAAQS*, which recommended the following hydrographic areas (HA) be designated nonattainment based on 2013–2015 monitoring data: Ivanpah Valley's northern part (HA 164A), Jean Lake Valley (HA 165), and the Las Vegas Valley (HA 212). The recommended designation for the remainder of the county was unclassifiable/attainment.

In December 2017, EPA issued its 120-day letter notifying the state of its proposed designations and offering an opportunity to submit additional information for consideration prior to the promulgation of final designations. After reviewing the county's submittal, EPA modified its proposed designation of the nonattainment area to include the Apex Valley (HA 216), based on 2014–2016 monitoring data. In February 2018, Clark County submitted a revised recommendation requesting that only the Las Vegas Valley be designated nonattainment, based on 2015–2017 monitoring data. EPA approved the request and the Las Vegas Valley was designated as a marginal nonattainment area for the 2015 ozone NAAQS effective August 3, 2018 (83 FR 25776).

1.2.2 2015 Ozone NAAQS Nonattainment Area

Figure 1-1 shows the Las Vegas Valley nonattainment area for the 2015 ozone NAAQS, defined as HA 212, which is the geographic area subject to this maintenance plan. The area encompasses approximately 1,500 square miles, largely under federal control.

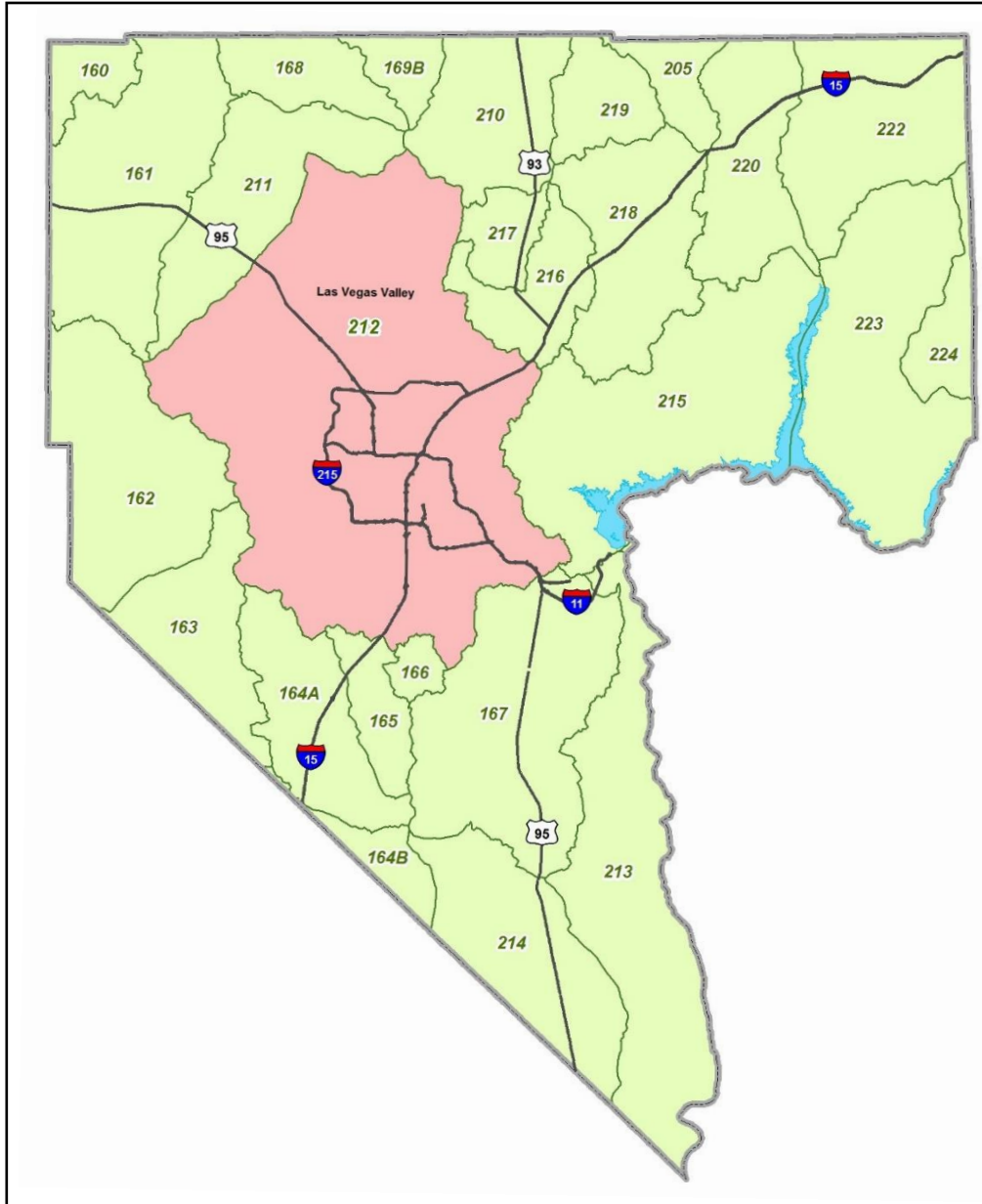


Figure 1-1. Las Vegas Valley Nonattainment Area (HA 212).

2.0 EMISSIONS INVENTORY

The final implementation rule for the 2015 ozone NAAQS, as codified at Title 40, Part 51.1315 of the Code of Federal Regulations (40 CFR 51.1315), requires the submittal of base year and periodic EIs for the nonattainment area to meet CAA requirements. This section addresses these requirements for the Las Vegas Valley nonattainment area.

2.1 BASE YEAR INVENTORY

CAA Sections 172(c)(3) and 182(a)(1) require the submittal of a base year inventory that is comprehensive, accurate, and current with respect to actual emissions of relevant pollutants from all sources in the nonattainment area. This inventory is due within two years of the effective date of NAAQS designation. The Clark County Department of Environment and Sustainability (DES) has developed an inventory of ozone precursors, nitrogen oxides (NO_x), and volatile organic compounds (VOCs) in the Las Vegas Valley nonattainment area for the 2017 base year that represents a typical ozone season weekday, as defined in 40 CFR 51.1300(q). DES is submitting this inventory to EPA to be approved into the SIP as the base year EI for the 2015 ozone NAAQS.

2.1.1 Emission Inventory Type Categories

Inventories for NO_x and VOC emissions for the Las Vegas Valley nonattainment area were developed for seven source categories: point, nonpoint, commercial aviation, federal aviation, onroad mobile, nonroad mobile, and biogenic. Point sources include large stationary sources (e.g., power plants, industrial plants) with the potential to emit at least 10 tons of VOCs or 25 tons of NO_x per year. Nonpoint sources are stationary sources that fall below point source reporting levels and are too numerous or small to identify individually (e.g., small-scale industrial or residential operations that use emission-generating materials or processes). Railway emissions are included in the nonpoint source category.

Commercial aviation in HA 212 includes emissions from McCarran International Airport, North Las Vegas Airport, and Henderson Executive Airport. Federal aviation includes emissions from Nellis Air Force Base. Onroad mobile sources consist of cars, trucks, motorcycles, and other motor vehicles traveling on public roadways. Nonroad mobile sources include a wide variety of equipment types that either move under their own power or can be moved from site to site, with the exception of locomotive, aircraft, and airport ground support equipment. Biogenic sources include crops, lawn grass, and forests, which produce isoprene, mono-terpene, alpha-pinene, and other VOCs; soils produce a small amount of NO_x emissions as well.

Appendix A, the technical support document, provides a description of each source category and a detailed explanation of EI estimates, including the methodologies used to calculate them.

2.1.2 Summary of Emission Inventories

Table 2-1 summarizes the estimated tons per day (tpd) of NO_x and VOCs emitted in the Las Vegas Valley nonattainment area in 2017 by source category. All EI estimates represent a typical ozone season day, defined in 40 CFR 51.1300(q) as an average day's emissions for a typical ozone season work weekday (and not a holiday).

Table 2-1. Summary of 2017 Ozone Season Weekday NO_x and VOC Emissions

Source Category	NO_x (tpd)	VOC(tpd)
Point sources	2.94	1.25
Nonpoint sources	6.94	59.49
Commercial aviation	11.45	1.70
Federal aviation	0.50	0.24
Onroad mobile	38.76	27.25
Nonroad mobile	36.58	23.96
Biogenic	0.86	124.19
Total	98.03	238.07

2.2 PERIODIC YEAR INVENTORY

CAA Sections 172(c)(3) and 182(a)(3)(A) require the submittal of a periodic EI every three years after submission of the base year inventory until the area is redesignated to attainment. The base year inventory for the Las Vegas Valley nonattainment area is the 2017 periodic EI. In its final implementation rule, EPA advised that air agencies can rely on the three-year cycle inventory described in EPA's Air Emissions Reporting Requirements rule to meet the periodic EI requirement (83 FR 63022). The next three-year inventory required by the rule will be for calendar year 2020. "DES will submit a comprehensive inventory of all 2020 ozone precursor emissions from point, nonpoint, and mobile sources to satisfy the periodic EI requirement. EPA will use these submittals to build the 2020 National Emissions Inventory, which is expected to be released in March 2023."

3.0 EMISSIONS STATEMENT PROGRAM

CAA Section 182(a)(3)(B) mandates that a SIP contain a requirement for all owners or operators of stationary sources located in the nonattainment area that emit either NO_x or VOCs to submit an annual statement showing actual emissions from that source. This section addresses the ES program requirements for the 2015 ozone NAAQS.

Such statements are mandated under AQR Section 12.9, “Annual Emissions Statement and Inventory Requirement,” which requires the submittal of an annual ES from each stationary source that emits 25 tons or more of NO_x or VOCs. In general, facilities subject to this section must submit actual emissions data for all NO_x and VOC emitting activities annually and certify that the information provided is accurate to the best of the certifier’s knowledge. AQR Section 12.9 was initially adopted as a local rule by the Clark County Board of County Commissioners (BCC) on March 16, 2010, and was subsequently revised to incorporate the ES requirements of CAA Section 182(a)(3)(B). The revised rule is scheduled to be adopted by the BCC at its August 4, 2020, meeting. Upon BCC adoption, the revised rule will be sent to EPA for approval and incorporation into the Nevada SIP.

DES has determined that AQR Section 12.9.1 meets the ES requirements of CAA Section 182(a)(3)(B) for the 2015 ozone NAAQS. Table 3-1 lists the CAA requirements and the corresponding AQR satisfying those requirements. DES requests EPA approval of this SIP revision as meeting the ES requirements of CAA Section 182(a)(3)(B).

Table 3-1. CAA Emissions Statement Requirements and Applicable AQR

CAA Section 182(a)(3)(B) Requirement	Applicable AQR
<p>182(a)(3)(B)(i)</p> <p>Within 2 years after November 15, 1990, the State shall submit a revision to the State implementation plan 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, in such form as the Administrator may prescribe (or accept an equivalent alternative developed by the State), for classes or categories of sources, showing the actual emissions of oxides of nitrogen and volatile organic compounds from that source. The first such statement shall be submitted within 3 years after November 15, 1990. Subsequent statements shall be submitted at least every year thereafter. The statement shall contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement.</p>	<p>AQR Section 12.9.1 Annual Emissions Statement and Inventory Requirement: Annual Emissions Statement</p> <p>(a) The Responsible Official of each Stationary Source that emits 25 tons or more of nitrogen oxide (NO_x) and/or volatile organic compounds (VOC) shall submit an annual emissions statement (Statement) to the department for the previous calendar year.</p> <p>(b) Pursuant to CAA Section 182(a)(3)(B), the Statement must include all actual emissions for all NO_x and VOC emitting activities.</p> <p>(c) The Statement shall be submitted to and received by the department on or before March 31 of each year, or other date as specified by the Control Officer in writing, and shall include a certification that the information contained in the Statement is accurate to the best knowledge of the individual certifying the Statement.</p>

CAA Section 182(a)(3)(B) Requirement	Applicable AQR
<p>182(a)(3)(B)(ii)</p> <p>The State may waive the application of clause (i) to any class or category of stationary sources which emit less than 25 tons per year of volatile organic compounds or oxides of nitrogen if the State, in its submissions under subparagraphs (1) or (3)(A), provides an inventory of emissions from such class or category of sources, based on the use of the emission factors established by the Administrator or other methods acceptable to the Administrator.</p>	<p>Sources that emit less than 25 tons of NO_x or VOC are exempt from AQR Section 12.9 emission statement requirements. Emissions from these sources are captured in the base year and periodic inventories required under CAA Sections 182(a)(1) and 182(a)(3)(A). The 2017 base year inventory provided in this submittal includes emissions from these sources. These inventories will be updated every three years until the area is redesignated to attainment. Details on the methods and emission factors used to calculate base year inventory emissions are based on emission factors established by or acceptable to the EPA and are provided in Appendix A, the technical support document.</p>

4.0 CONCLUSION

This document satisfies the emissions inventory and emissions statement requirements for the Las Vegas Valley nonattainment area established in the CAA and the final implementation rule for the 2015 ozone NAAQS. It has provided a complete, comprehensive, and accurate base year EI for the Las Vegas Valley nonattainment area. Furthermore, DES has shown it has an adequate ES program that meets the requirements of the 2015 ozone standard. Having fulfilled these requirements, DES asks EPA to approve this submission as a revision to the Nevada SIP for the 2015 ozone NAAQS.