

**Revision to Motor Vehicle Emissions Budgets  
for the 1997 Ozone NAAQS**

**Clark County, Nevada**

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## **EXECUTIVE SUMMARY**

This revision to the motor vehicle emissions budgets (MVEBs) in the *Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan: Clark County, Nevada* (2018 Ozone Maintenance Plan Revision), developed for the 1997 8-hour ozone standard, is a formal request by Clark County to the U.S. Environmental Protection Agency (EPA) to revise the MVEBs for 2022 based on updated emissions for the 2017 interim year and projected emissions for the 2022 maintenance year. The necessity to revise the MVEBs is explained below.

In October 2018, Clark County submitted the 2018 Ozone Maintenance Plan Revision to update the attainment inventory, maintenance demonstration, and MVEBs contained in the 2011 Ozone Maintenance Plan. On August 27, 2019, EPA conditionally approved the 2018 Ozone Maintenance Plan Revision based on Clark County's commitment to submit an additional State Implementation Plan (SIP) revision to reduce the safety margin allocations for the MVEBs within one year of the September 26, 2019, effective date.

The purpose of the SIP revision is to reduce the MVEB safety margin allocations to ensure that the 2018 Ozone Maintenance Plan Revision, when revised, will not interfere with reasonable further progress or attainment of the 2008 and 2015 ozone National Ambient Air Quality Standards (NAAQS). This revision updates the emissions inventory and approved MVEBs for nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) contained in the 2018 Ozone Maintenance Plan Revision. After EPA approval, the Regional Transportation Commission of Southern Nevada (RTC) will use these MVEBs for determining transportation conformity.

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## **ACRONYMS AND ABBREVIATIONS**

### Acronyms

CAA	Clean Air Act
EI	emission inventory
EPA	U.S. Environmental Protection Agency
EPP	Early Progress Plan
ERC	Emission Reduction Credit
MVEB	motor vehicle emissions budget
NAAQS	National Ambient Air Quality Standards
RTC	Regional Transportation Commission of Southern Nevada
SIP	State Implementation Plan

### Abbreviations

NO <sub>x</sub>	nitrogen oxides
tpd	tons per day
VOCs	volatile organic compounds

## 1.0 OVERVIEW

### 1.1 Introduction

Clark County, in conjunction with the Nevada Division of Environmental Protection, requests that EPA approve this revision to its *Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan* for the 1997 8-hour ozone standard, submitted to EPA in October 2018. This revision updates the motor MVEBs for 2022 based on updated emissions for the 2017 interim year and projected emissions for the 2022 maintenance year of NO<sub>x</sub> and VOCs after using the most recent EPA-approved motor vehicle emissions model (MOVES2014a) and the most current planning variables (e.g., vehicle miles traveled projections and population forecasts).

Once approved, the MVEBs in this revision will become the projected budgets that the RTC will use for determining transportation conformity under Section 176(c) of the Clean Air Act (CAA).

### 1.2 History

Clark County was designated in nonattainment of the 8-hour ozone NAAQS in April 2004. The Phase 1 Implementation Rule issued by EPA on June 15, 2004, classified Clark County as a “basic” nonattainment area under Subpart 1 of the CAA. Following this, the state of Nevada submitted a request to EPA to reconsider the boundaries of the nonattainment designation for Clark County. EPA accepted the Nevada recommendations, and issued a final rule in September 2004 delineating those boundaries.

On December 22, 2006, the U.S. Court of Appeals for the District of Columbia Circuit vacated the Phase 1 Implementation Rule. EPA and other entities petitioned for a rehearing. On June 8, 2007, the court reviewed its decision and decided to vacate only certain portions of the rule, including the classification determinations for areas designated under Subpart 1 of the CAA. After the court decision, EPA issued a memorandum (dated 6/15/2007) stating that nonattainment areas classified under “Subpart 1 are not currently subject to the June 15, 2007 submission date for their attainment demonstrations,” and established a transportation conformity rule that allowed states in nonattainment to submit an Early Progress Plan (EPP). The EPP allowed nonattainment areas to establish MVEBs that addressed the ozone NAAQS prior to a complete attainment demonstration. These actions obligated Clark County to develop the *Eight Hour Early Progress Plan for Clark County*. The Board of County Commissioners adopted and approved the EPP on June 17, 2008, after which it was submitted to EPA. In May 2009, EPA formally approved Clark County’s EPP.

In April 2011, Clark County submitted the *Ozone Redesignation Request and Maintenance Plan: Clark County, NV* (2011 Ozone Maintenance Plan) to EPA, requesting redesignation of the Clark County nonattainment area for the 1997 8-hour ozone NAAQS from nonattainment to attainment. On January 8, 2013, EPA approved the request; the Clark County nonattainment area was redesignated to “attainment” effective February 7, 2013 (78 FR 1149).

In October 2018, Clark County submitted the *Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan* (2018 Ozone Maintenance Plan Revision) to update the attainment inventory, maintenance demonstration, and MVEBs contained in the 2011 Ozone Maintenance Plan. On August 27, 2019, EPA issued final conditional approval of the 2018 Ozone Maintenance Plan Revision, noting the SIP continued to provide for maintenance of the 1997 ozone standard and, upon fulfillment of certain commitments, would not interfere with attainment or reasonable further progress of the 2008 and 2015 ozone NAAQS and the MVEBs meeting the applicable transportation conformity requirements (84 FR 44699). EPA’s conditional approval became effective September 26, 2019, and was based on the county’s commitment to submit an additional SIP revision to reduce the safety margin allocations for the MVEBs within one year of the effective date.

This submittal fulfills the County’s commitment to submit an additional SIP revision to reduce the safety margin allocations for the MVEBs by September 26, 2020.

## 2.0 UPDATED EMISSIONS INVENTORY

### 2.1 Emission Inventory Type Categories and Summary

The updated NO<sub>x</sub> and VOC emissions inventories (EIs) for Clark County were derived from estimates developed for eight EI type categories: point sources, nonpoint sources, commercial aviation, federal aviation, on-road mobile, non-road mobile, biogenic, and banked Emission Reduction Credits (ERCs).

Table 2-1 summarizes the 2017 and 2022 NO<sub>x</sub> EIs in tons per day (tpd). Table 2-2 summarizes the 2017 and 2022 VOC EIs in tpd.

Appendix A, the technical support document, provides a detailed explanation of EI estimates.

**Table 2-1. Summary of Total Daily NO<sub>x</sub> Emissions (tpd)**

Source Category	2017 NO <sub>x</sub>	2022 NO <sub>x</sub>
Point source	12.40	12.09
Nonpoint source	7.65	7.57
Commercial aviation	11.47	13.08
Federal aviation	0.50	1.97
On-road mobile	46.96	29.16
Non-road mobile	37.45	24.93
Biogenic	2.43	2.43
ERC	0.00	22.23
<b>Total</b>	<b>118.85</b>	<b>113.46</b>
<b>Total Difference from 2017</b>		<b>5.39</b>

**Table 2-2. Summary of Total Daily VOC Emissions (tpd)**

Source Category	2017 VOCs	2022 VOCs
Point source	2.95	3.12
Nonpoint source	62.56	65.58
Commercial Aviation	1.73	1.73
Federal Aviation	0.24	0.82
On-road mobile	29.47	20.92
Non-road mobile	28.25	26.71
Biogenic	362.61	362.61
ERC	0.00	0.43
<b>Total</b>	<b>487.77</b>	<b>481.89</b>
<b>Total Difference from 2017</b>		<b>5.89</b>

### 3.0 TRANSPORTATION CONFORMITY AND MOTOR VEHICLE EMISSIONS BUDGETS

#### 3.1 Transportation Conformity

Under CAA Section 176(c), transportation plans, programs, and projects in maintenance areas that are funded or approved under Title 23 of the U.S. Code or the Federal Transit Act must conform to the on-road MVEBs specified in the applicable SIP. In this case, 40 CFR 93.118 provides the criteria and procedures for MVEBs. The MVEB establishes a cap on motor vehicle-related emissions that cannot be exceeded by predicted transportation system emissions. It acts as a ceiling on emissions in the year for which it is defined, and for all subsequent years, until a different budget is defined for another year or a SIP revision modifies the budget. Unless the SIP clearly indicates otherwise, the estimate of future transportation network emissions used in the milestone or attainment demonstration acts as the MVEB.

#### 3.2 Motor Vehicle Emissions Budgets

Table 3-1 provides revised 2022 NO<sub>x</sub> and VOC MVEBs for Clark County. The MVEBs are obtained by adding 3 tpd of safety margin (less than the difference between 2017 and 2022 total emissions) to the updated 2022 on-road emissions in accordance with the county’s June 14, 2019 letter of commitment to the Nevada Division of Environmental Protection and EPA.

Upon an EPA affirmative adequacy finding and approval of the MVEBs, the RTC will use these budgets for transportation conformity determinations in future regional transportation plans.

**Table 3-1. NO<sub>x</sub> and VOC MVEBs for Clark County**

Year	NO <sub>x</sub> MVEBs (tpd)	VOC MVEBs (tpd)
2022 – maintenance	32.16	23.92