# Clark County Mitigation Plan for Exceptional Events



Clark County Department of Air Quality
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#### **ACRONYMS**

AQI Air Quality Index

AQR Clark County Air Quality Regulations

AQS Air Quality System

BACM Best Available Control Measures

BCC Clark County Board of County Commissioners

BMP Best Management Practice

CAA Clean Air Act

CFR Code of Federal Regulation
DAQ Department of Air Quality

EPA United States Environmental Protection Agency

FR Federal Register

NAAQS National Ambient Air Quality Standard

NEAP Natural Events Action Plan NEP Natural Events Policy NOV Notice of Violation

OAQPS Office of Air Quality Planning and Standards

PIA Public Information Administrator PIO Public Information Officer

PM<sub>10</sub> Particulate matter with an aerodynamic diameter of 10 micrometers or less

ppb parts per billion

SIP State Implementation Plan

UNLV University of Nevada, Las Vegas USG Unhealthy for Sensitive Groups

#### **Executive Summary**

In 2005, Congress passed legislation that amended Section 319 of the Clean Air Act to include (i) a definition for an exceptional event, (ii) a directive to the U.S. Environmental Protection Agency (EPA) to promulgate regulations for the treatment of air quality data influenced by exceptional events, and (iii) a set of principles to follow when promulgating the regulations.

Pursuant to these amendments, EPA passed regulations in 2007 addressing the treatment of air quality data influenced by exceptional events. These regulations were later revised in 2016 to require air agencies in areas with historically documented or known seasonal exceptional events to promulgate mitigation plans.<sup>1</sup>

EPA defines "historically documented or known seasonal exceptional events" to include events that are of the same type and involve emissions of the same pollutant, and that recur annually or seasonally. EPA used a benchmark of three or more events in three years, which applies regardless of an area's designation status with respect to the National Ambient Air Quality Standards. Under these circumstances, the requirement for a mitigation plan is triggered when an air agency flags the event for concurrence in the Air Quality System, regardless of whether the air agency submitted a demonstration.

Air agencies in Arizona, California, Nevada, and other states are required to submit one or more mitigation plans for various sources and pollutants. EPA provided written notice of the requirement to develop mitigation plans in the 2016 Exceptional Events Rule.<sup>2</sup> The effective date of the rule was September 30, 2016, and it required plan submittal within two years.<sup>3</sup>

Pursuant to the notice, and in accordance with the provisions outlined in 40 CFR 51.930(b), the Clark County Department of Air Quality is required to develop mitigation plans for wildfire events causing excessive ozone pollution and for high-wind events causing excessive PM<sub>10</sub> pollution. The department also developed a mitigation plan for wildfire and fireworks events causing excessive PM<sub>2.5</sub> pollution, and combined all three plans into this document.

Mitigation plans developed under 40 CFR 51.930 are not required to be included in a state implementation plan, or to be otherwise federally enforceable.<sup>4</sup> EPA will not formally review the substance of mitigation plans, in the sense of approving the details of specific measures and commitments; however, it will review each plan to verify that required elements are included.<sup>5</sup>

To remain eligible to request exclusion of data from consideration for regulatory purposes, this document must be submitted to EPA by September 30, 2018.

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<sup>&</sup>lt;sup>1</sup> 81 FR 68211 (Oct. 3, 2016).

<sup>&</sup>lt;sup>2</sup> Id., at 68272, Table 6 (Oct. 3, 2016).

<sup>&</sup>lt;sup>3</sup> Id. at 68282, "States shall submit their mitigation plans within 2 years of being notified..."

<sup>&</sup>lt;sup>4</sup> Id. at 68274.

<sup>&</sup>lt;sup>5</sup> Id.

#### 1.0 INTRODUCTION

The Clean Air Act (CAA) identified a set of principles that the U.S. Environmental Protection Agency (EPA) had to follow in developing and implementing regulations for exceptional events.<sup>6</sup> Among these principles are that protecting public health is the highest priority and that each state must take necessary measures to safeguard public health regardless of the source of air pollution.<sup>7</sup> The regulations implementing these principles are the mitigation plan components found in Title 40, Part 51.930(b) of the Code of Federal Regulations (40 CFR 51.930(b)).

At a minimum, each mitigation plan must contain three components. First, the plan must include public notification and education programs for affected or potentially affected communities. Such programs apply whenever air quality concentrations exceed or are expected to exceed a National Ambient Air Quality Standard (NAAQS). Second, the plan must include steps to identify, study, and implement mitigating measures. Third, the plan must include provisions for its periodic review and evaluation, its implementation, and its effectiveness.

The requirement for an exceptional events mitigation plan applies to those air agencies regulating areas that have had historically documented or known seasonal exceptional events.<sup>8</sup> EPA defines "historically documented or known seasonal exceptional events" to include events that are of the same type, involve emissions of the same pollutant, and recur on an annual or seasonal basis.<sup>9</sup> EPA used a benchmark of three or more events in three years, which applies regardless of an area's designation status with respect to the NAAQS. Under these circumstances, the requirement for a mitigation plan is triggered when an air agency flags an event for concurrence in EPA's Air Quality System (AQS), regardless of whether the air agency submitted a demonstration.

Written notice to submit mitigation plans was provided to certain air agencies during the 2016 exceptional events rulemaking process. <sup>10</sup> Current requirements predominantly impact western states. Several states, including Nevada, are required to submit more than one mitigation plan addressing different sources and pollutants.

EPA has required Clark County to develop mitigation plans for wildfire events causing excessive ozone pollution and for high-wind events causing excessive PM<sub>10</sub> pollution.<sup>11</sup> The county's mitigation plan additionally includes a plan for excessive PM<sub>2.5</sub> pollution caused by wildfire or firework events.

<sup>7</sup> CAA § 319(b)(3)(A).

<sup>&</sup>lt;sup>6</sup> *Id.* at 68270.

<sup>&</sup>lt;sup>8</sup> 81 FR 68211, 68271 (Oct. 3, 2016). Note that EPA indicated in the rule that the purpose of a mitigation plan is to help implement the mitigation principles found in CAA § 319(b)(3)(A), i.e., "the principle that each State must take necessary measures to safeguard public health regardless of the source of the air pollution."

<sup>9</sup> Id.

<sup>&</sup>lt;sup>10</sup> *Id.* at 68272 (Table 6).

 $<sup>^{11}</sup>$  PM $_{10}$  is particulate matter having an aerodynamic diameter of 10 microns or less: 10 microns is approximately one-seventh the diameter of a human hair.

#### 1.1 BACKGROUND

The issue of how to treat monitoring data affected by exceptional events has been considered since at least 1977, when EPA's Office of Air Quality Planning and Standards (OAQPS) produced "Guidelines for the Interpretation of Air Quality Standards." Since then, both EPA and Congress have taken actions to address the treatment of air quality data influenced by exceptional events. These include the promulgation of guidelines, policies, regulations, and congressional amendments to the CAA. A timeline and description of the documents is provided in Appendix A.

EPA makes the final determination as whether air quality data has been affected by an exceptional event based on supporting documentation sent by state or local agencies. Clark County's exceptional event demonstrations—those submitted after promulgation of the initial 2007 exceptional events regulations—are available at the website for the Clark County Department of Air Quality (DAQ).<sup>13</sup>

EPA's concurrence with an agency's monitoring data exclusion request can affect applicable air quality data in several ways. For one, EPA will exclude exceedance monitoring data in AQS for the affected days when generating user reports. EPA will also exclude applicable monitoring data in design values estimates unless the AQS user specifically indicates it should be included. <sup>14</sup>

EPA will also exclude the data for purposes of selecting appropriate background concentrations for New Source Review (NSR) air quality analyses or for transportation conformity hot spot analyses. The data will continue to be publicly available, but EPA's publications and public information statements on the status of air quality in the affected area will not reflect the data in any summary statistic of potential regulatory application unless such inclusion is specifically noted. <sup>15</sup>

#### 1.1.1 PM<sub>10</sub> NAAQS Attainment Status

EPA initially identified Clark County as a possible PM<sub>10</sub> nonattainment area in 1987.<sup>16</sup> In 1991, the Las Vegas Valley portion of Clark County was retroactively designated a moderate PM<sub>10</sub> nonattainment area by operation of law.<sup>17</sup> In 1991, EPA required Clark County to submit an State Implementation Plan (SIP) that would demonstrate attainment of the PM<sub>10</sub> NAAQS by 1994.

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<sup>&</sup>lt;sup>12</sup> EPA/OAQPS, "Guidelines for the Interpretation of Air Quality Standards," No. 1.2-008 (rev. February 1977).

<sup>&</sup>lt;sup>13</sup> <a href="http://www.clarkcountynv.gov/airquality/planning/Pages/Planning\_ExceptionalEvents.aspx">http://www.clarkcountynv.gov/airquality/planning/Pages/Planning\_ExceptionalEvents.aspx</a> (accessed October 24, 2017).

<sup>&</sup>lt;sup>14</sup> EPA letter to DAQ dated June 25, 2014, "EPA concurs with DAQ's submittal of exceedance occurring on July 3, 2011, affecting monitoring data within Clark County."

<sup>15</sup> *Id*.

<sup>16 52</sup> FR 29383.

<sup>&</sup>lt;sup>17</sup> Formally codified on November 6, 1991 (56 FR 56694, 56705).

Due to unprecedented growth, high-wind events, and other factors, Clark County could not demonstrate attainment by the required date. In 1993, EPA reclassified the Las Vegas Valley portion of Clark County to a serious PM<sub>10</sub> nonattainment area.<sup>18</sup>

In 1997, a PM<sub>10</sub> SIP revision was submitted. In 2000, the Clark County Board of County Commissioners (BCC) requested that the state formally withdraw all previously submitted SIPs and addenda because none demonstrated attainment of the NAAQS. In 2001, Clark County submitted a new SIP that included a set of comprehensive fugitive dust regulations implementing Best Available Control Measures (BACM) for various types of fugitive sources.

In 2004, EPA approved Clark County's PM<sub>10</sub> SIP.<sup>19</sup> In 2007, Clark County submitted a milestone achievement report to EPA that described the county's progress in implementing the SIP. In 2010, EPA determined that the Las Vegas Valley had attained the PM<sub>10</sub> NAAQS.<sup>20</sup>

In 2014, EPA formally redesignated the Las Vegas Valley to attainment status and approved DAQ's ten-year PM<sub>10</sub> maintenance plan for the valley.<sup>21</sup> The maintenance plan set forth Clark County's commitment to continue to enforce the stringent BACM-based mitigation measures developed for the 2001 PM<sub>10</sub> SIP. Currently, all of Clark County has been designated either attainment or unclassifiable for the PM<sub>10</sub> NAAQS.

#### 1.1.2 Ozone NAAQS Attainment Status

EPA initially identified the Las Vegas Valley as a photochemical oxidant nonattainment area in 1978 (43 FR 8962). In 1979, EPA revised the photochemical oxidants NAAQS to an ozone NAAQS, keeping the one-hour averaging time, but changing the level to 0.12 parts per million (ppm) (44 FR 8202). The nonattainment designation for Las Vegas Valley for photochemical oxidants carried over to the one-hour ozone NAAQS.

In response, Clark County adopted a comprehensive set of NSR regulations, chlorine stationary source emission limitations, and a vehicle inspection and maintenance program. In 1986, EPA approved the county's ozone SIP and redesignated the Las Vegas Valley as an attainment area for the 1979 ozone NAAQS.<sup>22</sup>

In 1997, EPA revised the ozone NAAQS, replacing the one-hour 0.12 ppm standard with an 8-hour 0.08 ppm standard that was based on the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within a given area.<sup>23</sup> After considerable litigation at the federal level over the NAAQS, EPA designated portions of Clark County in nonattainment in 2004 (Table 1).

19 69 FR 32273.

<sup>&</sup>lt;sup>18</sup> 58 FR 3334.

<sup>&</sup>lt;sup>20</sup> 75 FR 45485.

<sup>&</sup>lt;sup>21</sup> 79 FR 60078.

<sup>&</sup>lt;sup>22</sup> 51 FR 41788, 41789 (November 19, 1986).

<sup>&</sup>lt;sup>23</sup> 62 FR 38856.

**Table 1: 1997 Ozone NAAQS Nonattainment Areas** 

Hydrographic Area	Valley
164A, 164B, 165, and 166	Ivanpah Valley
167	Eldorado Valley (includes Boulder City)
212	Las Vegas Valley
213	Colorado River Valley (excluding the Fort Mojave Indian Reservation)
214	Paiute Valley
216 & 217	Apex Valley
218	Moapa Valley (excluding the Moapa River Indian Reservation)

In 2008, EPA revised the 8-hour ozone NAAQS to 0.075 ppm. In 2012, EPA designated all of Clark County to be in attainment or unclassifiable for the 2008 standard.<sup>24</sup> In 2013, EPA approved Clark County's ten-year maintenance plan for the 1997 ozone NAAQS and redesignated the 1997 nonattainment area to an attainment status.<sup>25</sup> All of Clark County is currently designated either attainment or unclassifiable for both the 1997 and 2008 ozone NAAQS.

In 2015, EPA again revised the 8-hour ozone NAAQS, lowering the standard to 0.070 ppm. In a letter sent to the Nevada Department of Environmental Protection, dated September 20, 2016, DAQ provided nonattainment area designation recommendations for Clark County. The state then submitted DAQ's recommended area designations to EPA in a letter dated September 22, 2016. EPA disagreed with the recommendations and issued a 120-day letter to the governor on December 20, 2017. Clark County responded through NDEP with more current 2015, 2016 and 2017 data and revised analysis, recommending designation of Hydrographic Area 212 (Las Vegas Valley) as marginal nonattainment and all other areas of the county as attainment/unclassifiable. Administrator Pruitt signed a rulemaking April 30, 2018 designating Hydrographic Area 212 as marginal nonattainment for the 2015 ozone NAAQS and designating all other areas of Clark County as attainment/unclassifiable. On June 4, 2018, EPA designated the Las Vegas Valley (HA 212) as a nonattainment area for the 2015 O3 NAAQS, effective August 3, 2018 (83 FR 25776).

#### 1.1.3 PM<sub>2.5</sub> NAAQS Attainment Status

The PM<sub>2.5</sub> NAAQS was established in 1997 (annual and 24-hour standards) and subsequently revised in 2006 and 2012. All areas of Clark County have been designated attainment/unclassifiable since the PM<sub>2.5</sub> NAAQS was first promulgated.

#### 1.1.4 High-Wind Events

In 1986, EPA issued "Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events" (Appendix A). The guideline identified qualifying high winds as a potential exceptional event. However, it wasn't until EPA issued its 1996 Natural Events Policy (NEP) that the agency set forth the public notification, education, and mitigation requirements under

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<sup>&</sup>lt;sup>24</sup> 77 FR 30088, 30134 (May 21, 2012).

<sup>&</sup>lt;sup>25</sup> 78 FR 1149 (January 8, 2013).

which a state or local agency could exclude particulate matter data that had been influenced by a high-wind event.<sup>26</sup>

The NEP recognized that ambient PM<sub>10</sub> concentrations caused by dust raised by unusually high winds could be treated as uncontrollable natural events if the dust originated from non-anthropogenic sources, or from anthropogenic sources controlled with BACM.<sup>27</sup>

In 2005, DAQ promulgated the *Clark County Natural Events Action Plan* (NEAP) to address the treatment of PM<sub>10</sub> pollution data influenced by high-wind events.<sup>28</sup> The NEAP followed the guidelines set forth in EPA's NEP, and was adopted by the BCC following lengthy discussions with stakeholders and public comment. The NEAP set forth DAQ's obligations to the citizens of Clark County by addressing three primary mitigation plan components: (i) public notification, (ii) public education, and (iii) mitigation efforts. The NEAP included all of the commitments and standardized information necessary to permit EPA to justify exclusion of applicable PM<sub>10</sub> monitoring data influenced by high-wind events.

Within Clark County, exceedances of the PM<sub>10</sub> NAAQS are largely caused by windblown dust. High-wind events, in particular, are problematic since they can overwhelm the control measures set forth in the Clark County Air Quality Regulations (AQRs). The NEAP set forth prescriptive wind thresholds defining high-wind events that were based on wind tunnel studies conducted by the University of Nevada, Las Vegas (UNLV) at a variety of locations throughout the Las Vegas Valley, as described in Clark County's 2001 PM<sub>10</sub> SIP. Al-though other variables, such as soil moisture content and PM<sub>10</sub> reservoir depletion, are factors, the study indicated that high-wind events generally occur when there are sustained wind speeds of at least 25 miles per hour (mph) and/or wind gusts of at least 40 mph.<sup>29</sup>

In 2013, EPA issued interim guidance on the preparation of demonstrations in support of requests to exclude ambient air quality data affected by high winds under the Exceptional Events Rule. The guidance stated: "EPA will generally accept a threshold of a sustained wind of 25 mph for areas in the West provided the agencies submit evidence of this as the level at which they expect stable surfaces (i.e., controlled anthropogenic and undisturbed natural surfaces) to be overwhelmed." <sup>30</sup>

<sup>&</sup>lt;sup>26</sup> EPA, "Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events," EPA-450/4-86-007 (July 1986); EPA memorandum, "Areas Affected by PM-10 Natural Events" (May 1996).

<sup>&</sup>lt;sup>27</sup> Note also that EPA has formally defined a natural event [40 CFR 50.1(k)] to be "an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, *anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions*" (emphasis added).

<sup>&</sup>lt;sup>28</sup> Clark County Natural Events Action Plan for High-Wind Events in Clark County, Nevada (April 2005).

<sup>&</sup>lt;sup>29</sup> June 2001 PM<sub>10</sub> State Implementation Plan for Clark County, Appendix B - Emission Inventories, Methodology, Emission Factors, and Emission Estimates, Page B-37 Native Desert Fugitive Dust, and Appendix C – Section II, Estimation of Valley-Wide PM<sub>10</sub> emissions using UNLV 1995 wind tunnel-derived emission factors, 1998-1999 emission factors, revised vacant land classifications, and GIS-based mapping of vacant lands, – Draft Final Report, David James, et al., Civil and Environmental Engineering Department, University of Nevada Las Vegas, dated September 12, 2000. 81 FR 68216, 68257 (Oct. 3, 2016), and *Id.* at 68259, fn 85.

<sup>&</sup>lt;sup>30</sup> EPA, p. 3, <a href="https://www.epa.gov/air-quality-analysis/interim-guidance-preparation-demonstrations-support-re-quests-exclude-ambient">https://www.epa.gov/air-quality-analysis/interim-guidance-preparation-demonstrations-support-re-quests-exclude-ambient</a> (May 2013).

In 2015, EPA proposed to codify in rule language the definition of "high wind threshold" as the minimum threshold wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by a high-wind dust event.<sup>31</sup> Citing the wind-tunnel studies conducted by UNLV, EPA stated in its final rule: "[t]he Administrator will accept a high wind threshold of a sustained wind of 25 mph for areas in the States of Arizona, California, Colorado, Kansas, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming provided this value is not contradicted by evidence in the record at the time the State submits a demonstration." <sup>32</sup>

#### 1.1.5 Wildfire Events

During wildfire events, both ozone precursor and PM<sub>2.5</sub> emissions can influence air quality data within Clark County. For this reason, advisories typically issued during wildfire events include public health warnings related to both pollutants.

In 2007 and 2016, EPA issued rules for the treatment of data influenced by exceptional events.<sup>33</sup> In those rules, EPA defined a wildfire as "any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event."<sup>34</sup>

In 2015, EPA issued the draft guidance *Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations*.<sup>35</sup> A year later, EPA issued final guidance<sup>36</sup> that established three different tiers of demonstrations for air agencies to use in developing evidence for wildfire exceptional events demonstrations.

#### 1.1.6 Fireworks Events

Some national and/or cultural traditions, such as Independence Day, Chinese New Year, or New Year's Day, have long included fireworks displays as important elements of their observances. EPA stated in the 2007 final rule *Treatment of Data Influenced by Exceptional Events* that it "believes that Congress did not intend to require EPA to consider air quality violations associated with such cultural traditions in regulatory determinations." <sup>37</sup>

40 CFR Part 50.14(b)(2) states: "EPA shall exclude data from use in determinations of exceedances and violation of a NAAQS where a state demonstrates to EPA's satisfaction that emissions from fireworks displays caused a specific air pollutant concentration to be in excess of one or more NAAQS at a particular monitoring location.... Such data will be treated in the same manner as exceptional events under this rule, provided a State demonstrates that such use of fireworks is

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<sup>&</sup>lt;sup>31</sup> 80 FR 72840 (Nov. 20, 2015).

<sup>&</sup>lt;sup>32</sup> 40 CFR 50.14(b)(5)(iii).

<sup>&</sup>lt;sup>33</sup> 72 FR 13559 (Mar. 22, 2007), and 81 FR 68216 (Oct. 3, 2016).

<sup>&</sup>lt;sup>34</sup> 40 CFR 50.1(n).

<sup>35</sup> https://www.epa.gov/sites/production/files/2015-11/documents/o3 draft wildfire guidance.pdf.

<sup>&</sup>lt;sup>36</sup> Memorandum from OAQPS to regional air directors (Sep 16, 2016).

<sup>&</sup>lt;sup>37</sup> 72 FR 13560, 13577 (Mar. 22, 2007).

significantly integral to traditional national, ethnic, or other cultural events including, but not limited to July Fourth celebrations...."38

Most PM<sub>2.5</sub> demonstrations submitted to EPA by air agencies address emissions influenced by wildfire events. However, there are a few examples of demonstrations that have been submitted to show the influence of firework events on PM<sub>2.5</sub> air quality data, for instance, submittals by Rose Park and West Valley, Utah (July 2007), and Granite City, Illinois (July 2008).<sup>39</sup>

#### 1.2 AREA OF MITIGATION PLAN APPLICABILITY

Table 6 of EPA's 2016 update of *Treatment of Data Influenced by Exceptional Events* specifies the areas of applicability for mitigation plans.<sup>40</sup>

#### 1.2.1 $PM_{10}$ Pollutant

For the high winds PM<sub>10</sub> mitigation plan, EPA requires the area of applicability to include the former Clark County PM<sub>10</sub> nonattainment area. <sup>41</sup> This portion of Clark County, i.e., the Las Vegas Valley (Hydrographic Area (HA) 212), was redesignated as an attainment area in 2014. It is currently subject to an EPA-approved PM<sub>10</sub> maintenance plan. <sup>42</sup>

The NEAP included the Apex Valley (HAs 216 & 217), northeast of the Las Vegas Valley, in the area of PM<sub>10</sub> mitigation applicability.<sup>43</sup> This mitigation plan also encompasses the Apex Valley (Figure 1) in its area of applicability.

<sup>42</sup> 79 FR 60078 (Oct. 6, 2014).

<sup>&</sup>lt;sup>38</sup> 40 CFR 50.14(b)(2).

<sup>&</sup>lt;sup>39</sup> https://www.epa.gov/air-quality-analysis/exceptional-events-submissions-table-2007-rule.

<sup>&</sup>lt;sup>40</sup> 81 FR 68216, 68272 (Oct. 3, 2016).

<sup>41</sup> Id.

<sup>&</sup>lt;sup>43</sup> NEAP (April 2005).

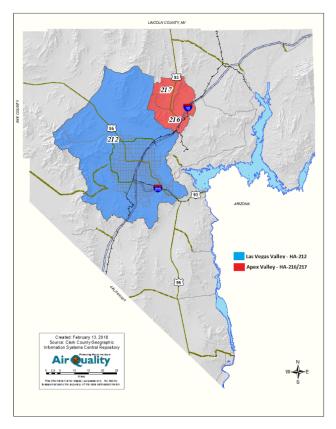


Figure 1: Area of Applicability for PM<sub>10</sub> Mitigation Plan

#### 1.2.2 Ozone Pollutant

For ozone data influenced by wildfire events, EPA requires that the area of applicability for the mitigation plan include all of Clark County. 44

#### 1.2.3 PM<sub>2.5</sub> Pollutant

For PM<sub>2.5</sub> data influenced by wildfire and fireworks events, the area of applicability for the mitigation plan includes all of Clark County.

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<sup>&</sup>lt;sup>44</sup> 81 FR 68211, 68272, Table 6.

## 2.0 FIRST MITIGATION PLAN COMPONENT: PUBLIC NOTIFICATION AND EDUCATION

The CAA provides a set of principles for the EPA administrator to follow when promulgating exceptional events regulations. Among these is the requirement that timely information be provided to the public in any case in which the air quality is unhealthy.<sup>45</sup> In conformance with these provisions, EPA codified Sections 51.930(a)(1) and 51.930(b)(2)(i) of 40 CFR, requiring prompt notification for *affected or potentially affected communities* whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard.

To determine the location of *affected or potentially affected communities* impacted by an exceptional event, DAQ tracks and forecasts regional meteorology and monitoring data daily. The Las Vegas Valley covers an area of approximately 1,564 square miles. <sup>46</sup> Since high-wind events tend to impact most parts of the valley, notification tends to be ubiquitous. To ensure prompt notification of *affected or potentially affected communities*, DAQ has identified organizations that can effectively disseminate information to persons most at risk of exposure based on age and health status. Agencies promptly notified include:

- Clark County School District
- Clark County Health District
- Clark County Department of Parks and Recreation
- Local municipalities (cities of Las Vegas, Henderson, North Las Vegas, and Boulder City).

DAQ also notifies local radio and television stations, and puts out social media alerts.

#### 2.1 PUBLIC NOTIFICATION

EPA indicated in the 2016 Exceptional Events Rule that most air agencies likely have established processes sufficient to meet the public notification element of the mitigation plan.<sup>47</sup> This is the case for DAQ, which first developed its public notification element for the 2005 NEAP. The department issues two types of public notifications when air quality concentrations exceed or are expected to exceed the NAAQS: preemptive and concurrent.

#### 2.1.1 Air Quality Advisories

An *air quality advisory* is a notification issued when forecast conditions are favorable for pollutant levels to exceed the NAAQS—i.e., to reach the Unhealthy for Sensitive Groups (USG) level on the Air Quality Index (AQI)—or when public health and safety might be in danger. DAQ issues several different types of advisories, depending on the pollutant and event, as described in its policy AQP-018, "Exceptional Events" (Appendix B).

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<sup>&</sup>lt;sup>45</sup> CAA Section 319(b)(3)(A).

<sup>46</sup> http://water.nv.gov/programs/planning/dictionary/appd-A1.pdf

<sup>&</sup>lt;sup>47</sup> 81 FR 68211, 68274 (Oct. 3, 2016).

#### 2.1.2 Air Quality Alerts

An *air quality alert* is a notice issued when air quality levels have already reached, or are expected to reach, the USG level. AQP-018 describes the roles and responsibilities of participants and the process for issuing an alert (Appendix B).

#### 2.2 EDUCATION

40 CFR Part 51.930(a)(2) requires education concerning actions that individuals may take to reduce exposure to unhealthy levels of air quality during and after an exceptional event. 40 CFR Part 51.930(b)(2)(i) requires that education be provided to affected or potentially affected communities whenever air quality concentrations exceed, or are expected to exceed, the NAAQS.

Clark County provides education through a variety of formats, including advisories and alerts, EnviroFlash messaging, and outreach events. In addition, certain construction site personnel are required to attend DAQ's "Dust Class" in accordance with the AQRs.

#### 2.2.1 Advisory and Alert Education

The information in an advisory or alert begins with a summary of the pollutants involved, a description of the event, and an estimation of how long the event will last. The education information that follows focuses on providing affected or potentially affected communities with immediate information about actions they may take to reduce exposure and mitigate emissions of the applicable pollutant.

#### 2.2.1.1 Elevated PM<sub>10</sub> Pollution due to High-wind event

When an advisory or alert is issued in response to an exceedance or expected exceedance of the PM<sub>10</sub> NAAQS due to a high-wind event, DAQ provides information in the following format:

Under windy conditions, localized or valley-wide areas of blowing dust are likely to occur. Airborne dust is a form of inhalable air pollution called particulate matter, or PM<sub>10</sub>, which aggravates respiratory diseases such as bronchitis and asthma. It may be best for children, the elderly, and people with respiratory diseases to stay indoors. If you are experiencing breathing difficulties or medical conditions that you think are related to air quality, see your doctor. Detailed air quality conditions are posted in the monitoring section of the DAQ website. You can receive free air quality forecasts and advisories via e-mail or text message through EnviroFlash service. Subscription information available at <a href="www.enviroflash.org">www.enviroflash.org</a>. Residents are encouraged to call Air Quality's dust-complaint hotline at (702) 385-DUST to report excessive amounts of blowing dust. Officials also recommend the following tips to keep dust down:

- Drive slowly on unpaved roads.
- Don't take short cuts across vacant lots.

- Ride off-road vehicles in approved areas outside the urban Las Vegas Valley.
- Limit outdoor exertion on windy days with dust is in the air. Exercise, for example, makes you breathe heavier and increases the amount of particulates you are likely to inhale.
- Keep windows closed. Run your air conditioner inside your house and car to filter out particulates.
- Consider changing your indoor air filters if they are dirty.

#### 2.2.1.2 <u>Elevated Ozone Pollution due to Wildfire Event</u>

When an advisory or alert is issued in response to an exceedance or expected exceedance of the ozone NAAQS due to a wildfire event, DAQ provides information in the following format:

People who may be most sensitive to elevated levels of particulates and ozone include individuals with respiratory problems, cardiac disease, young children or senior citizens. Consult your physician if you have a medical condition that makes you sensitive to air quality conditions.

Smoke is made of small particles and other pollutants that can aggravate respiratory diseases and contribute to ground-level ozone formation. Exposure to ozone can induce coughing, wheezing and shortness of breath even in healthy people.

Clark County Air Quality officials will continue to monitor conditions and will post an update on the forecast page of the DAQ website. A link to the forecast page is located at <a href="http://redrock.clarkcountynv.gov/forecast/">http://redrock.clarkcountynv.gov/forecast/</a>. You can receive free air quality forecasts and advisories via e-mail or text message through Enviro-Flash service. Subscription information available at <a href="https://www.enviroflash.org">www.enviroflash.org</a>.

#### SMOKE AND OZONE TIPS

- Stay indoors when you smell or see smoke.
- Limit outdoor activity and exertion when ozone levels are elevated exercise makes you breathe heavier and increases the amount of ozone you may inhale.
- Keep windows and doors closed. Run your air conditioner inside your house and car. Air conditioning filters out smoke and particles.
- Change your indoor air filters if they are dirty.
- Schedule activities for the morning or evening when ozone levels are usually lower.
- Substitute a less intense activity—walk instead of jog, for example.
- Reduce driving—combine errands into one trip.

- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up, and don't top off your tank.
- Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

#### 2.2.1.3 Elevated PM<sub>2.5</sub> Pollution due to Wildfire or Fireworks Event

When an advisory or alert is issued in response to an exceedance or expected exceedance of the PM<sub>2.5</sub> NAAQS due to a wildfire or fireworks event, DAQ provides information in the following format:

Air Quality officials say that small particles can aggravate respiratory diseases. People who may be most sensitive to elevated levels fine particles include individuals with respiratory problems, cardiac disease, young children or senior citizens. Consult your physician if you have a medical condition that makes you sensitive to air quality conditions. County Air Quality officials will continue to monitor conditions and will post updates as needed on the forecast page of the DAQ website at <a href="http://redrock.clarkcountynv.gov/forecast/">http://redrock.clarkcountynv.gov/forecast/</a>. You can receive free air quality forecasts and advisories via e-mail through Enviroflash service. Subscription information is available at <a href="https://www.enviroflash.org">www.enviroflash.org</a>

#### Tips to limit personal exposure to fine particles include:

- Limit outdoor exertion on days with high levels of fine particles in the air. Exercise makes you breathe heavier and increases the amount of particulates you are likely to inhale.
- Keep windows and doors closed.
- Consider changing your indoor air filters if they are dirty.

Advisories and alerts are issued by the DAQ Public Information Administrator, who also sends out the information to the Clark County School District, Southern Nevada Health District, Clark County Department of Parks and Recreation, local municipalities (cities of Las Vegas, Henderson, North Las Vegas, and Boulder City), local media outlets (e.g., radio and television stations), and on social media, in accordance with Section 4.1.3 of AQP-018 (Appendix B).

#### 2.2.2 EnviroFlash

EnviroFlash is a system that sends out daily air quality forecasts based on local air quality monitoring and weather data, represented by the AQI. EPA assigned a specific color to each AQI category to make it easier for people to understand quickly whether air pollution is reaching unhealthy levels in their communities. EPA calculates the AQI for five major air pollutants, including PM<sub>10</sub>. When AQI values are above 100, air quality is considered to be unhealthy—at first for certain sensitive groups of people, then for everyone.

DAQ encourages interested persons to sign up for this free service on its website and during outreach events that take place throughout the year. The information provided by EnviroFlash can be sent via email, Twitter, Facebook, or RSS feed. In addition, the EnviroFlash application is available on both the Apple and Android smartphone platforms.

The information provided by EnviroFlash is the same as that provided to local radio or television stations. See Appendix B for additional details.

#### 2.2.3 Outreach

The primary purpose of DAQ's outreach program is to educate the public about local air quality issues. Air quality information is disseminated in a variety of venues and formats; for example, DAQ staff take part in well-established local events such as Earth Day, health fairs, and speaking engagements at schools. Staff at these events answer questions and hand out pamphlets, calendars, coloring books, etc. Extensive air quality information is also available on DAQ's website.

Air quality education can be conveyed through a variety of air quality programs, such as Club Ride, Smog Spotter (where reports of smoking vehicles can be reported anonymously over the internet), and the dust complaint hotline (where individuals can report excessive amounts of blowing dust). Past programs have included monetary incentives, such as Clark County's voluntary vehicle repair program and gasoline lawnmower exchange.

#### 2.2.4 Dust Class

AQR Section 94.7.6 establishes a requirement for individuals to attend a dust class when working on specific types of construction projects. Construction sites of at least 50 acres or more of disturbed soil require someone on-site to monitor dust emissions (i.e., a dust monitor). Site supervisors are also required to attend a dust class to learn how to instruct site personnel (particularly water truck operators) about BMPs, applicable AQRs, and abatement and/or mitigation measures during high-wind conditions.

Compliance and Enforcement Division staff conduct the dust class twice a month. Class schedules and registration forms are available on the DAQ website.

## 3.0 SECOND MITIGATION PLAN COMPONENT: MITIGATION MEASURES

The second component of the mitigation plan requires steps to identify, study, and implement mitigating measures.

#### 3.1 MEASURES TO ABATE OR MINIMIZE CONTROLLABLE SOURCES

40 CFR Part 51.930(b)(2)(ii)(A) requires measures to abate or minimize controllable sources of identified pollutants. The sections that follow describe the control measures, both full-time and contingent, that DAQ has already implemented in accordance with the PM<sub>10</sub> and ozone maintenance plans.

#### 3.1.1 PM<sub>10</sub> Emission Sources

In the 2016 exceptional events rule, EPA provided the following definition of a natural event: "an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions" (emphasis added). <sup>48</sup> Clark County's 2001 PM<sub>10</sub> SIP included a set of comprehensive fugitive dust regulations implementing BACM for various fugitive sources. <sup>49</sup> The BACM provisions were coded into the AQRs described below.

Section 90 requires stabilization of open areas and vacant lands to prevent entrainment of particulate matter. Land that has been bladed for construction but left vacant is often highly susceptible to the generation of windblown dust. Newly constructed business parks and residential areas often have tracts of land that have been disturbed by removing native soils and vegetation. Methods for dust control at such sites include (i) limiting off-road use of recreational vehicles, (ii) stabilizing vacant land, (iii) constructing windbreaks, (iv) controlling weed abatement, and (v) creating dust mitigation plans for large tracts of publicly and privately owned lands.

**Section 91** requires stabilization of unpaved roads and paving of unpaved roads when traffic volume is equal to or greater than 150 vehicles per day. This regulation also prohibits construction of new unpaved roads in public thoroughfares. Depending on the soil properties, heavily-used unpaved roads can develop a loose, powdery surface that generates significant amounts of wind-blown dust even with moderate wind speeds. Methods to control dust from unpaved roads include(i) prohibiting new unpaved roads in public thoroughfares, (ii) reducing traffic and controlling speeds on unpaved roads, (iii) stabilizing unpaved roads/alleys using chemical dust suppressants, and (iv) prioritizing the paving of unpaved roads based on the amount of traffic, production of dust, and vicinity of people, schools, etc. (Roads with 150 average daily trips have paving priority).

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<sup>&</sup>lt;sup>48</sup> 40 CFR 50.1(k).

<sup>&</sup>lt;sup>49</sup> BACM are methods that can be used to reduce or eliminate windblown dust in areas where natural soils have been disturbed and are more prone to erosion by the wind. EPA has defined BACM as the maximum degree of emission reduction feasible for a significant source category (59 FR 42010 (August 16, 1994)).

Section 92 requires stabilization of unpaved parking areas, including material handling and storage yards, and generally prohibits construction of new unpaved parking lots in the nonattainment area. Methods for dust control at such sites include (i) paving parking areas, treating them with a dust suppression chemical, and/or restricting parking in unpaved areas; (ii) using grasses that require infrequent watering for school playgrounds; and (iii) treating storage yards with a dust suppression chemical or with gravel.

**Section 93** sets forth requirements for paved roads, street sweeping equipment, and certain other dust-mitigating devices. Dust from road shoulders and dirt that is tracked, washed, or blown onto paved surfaces can continue to be re-entrained into the air by passing vehicles. Some dust control methods called for in this regulation include (i) stabilizing road shoulders by paving, covering with gravel, or using chemical dust suppressants; (ii) using PM<sub>10</sub>-efficient sweepers to clean paved roads; and (iii) using vacuum crack seal equipment. In addition to the road shoulder requirements set forth in Section 93, silt deposition onto paved roads can be further minimized by the track-out prevention and cleanup requirements for construction sites (see Section 94 discussion below), Clark County's robust storm water infrastructure, and the rapid silt cleanup programs implemented by public works agencies for HA 212 (discussed below).

Section 94 establishes permitting and dust control requirements for construction activities. This regulation incorporates by reference a comprehensive dust control handbook that outlines BMPs for construction activities. Activities covered by BMPs include backfilling; blasting—abrasive; blasting—soil and rock; clearing and grubbing; clearing forms; crushing; cut and fill; demolition—implosion; demolition—mechanical/manual; disturbed soil; disturbed land—long-term stabilization; dust suppressant, dust palliative, and surfactant selection and use; importing/exporting soil, rock, and other bulk materials; landscaping; paving/subgrade preparation; sawing/cutting material; screening; staging areas; stockpiling; track-out prevention and cleanup; traffic—unpaved routes and parking areas; trenching; and truck loading.

In addition to the AQRs above, Clark County maintains a robust flood control system for HA 212 that minimizes silt deposition from flood waters onto roads, parking areas, and undeveloped lands. The system undergoes continuous expansion to accommodate new development in the Las Vegas Valley (the most recent update is titled 2018 Las Vegas Valley Flood Control Master Plan Update and dated January 9, 2017).<sup>51</sup> The Nevada Department of Transportation, Clark County, the City of Las Vegas, the City of North Las Vegas, and the City of Henderson also maintain a policy of rapidly removing silt depositors onto paved roads after storm events. These practices are implemented to achieve multiple environmental objectives and are documented in Appendix J of the 2001 PM<sub>10</sub> SIP.<sup>52</sup>

The 2001 PM<sub>10</sub> SIP demonstrated that Clark County's adoption of comprehensive fugitive dust regulations, implementation of BACM, and continuation of controls for stationary sources would result in attainment of the annual average PM<sub>10</sub> NAAQS by 2001. EPA granted Clark County a

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<sup>&</sup>lt;sup>50</sup> http://www.clarkcountynv.gov/airquality/compliance/Pages/Compliance DustForms.aspx

<sup>51</sup> http://gustfront.ccrfcd.org/pdf\_arch1/MasterPlans/Las%20Vegas%20Valley/2018/Las%20Vegas%20Valley%202018%20Flood%20Control%20Master%20Plan%20Update%20-%20Progress%20Report%20%231.pdf
52 http://www.clarkcountynv.gov/airquality/planning/Documents/SIP/PM10/App J-

Street Sweeping Equipment and Paved Road Cleanup Programs.pdf

five-year extension for the 24-hour PM<sub>10</sub> NAAQS attainment date after Clark County supported its extension request with a most stringent measure control analysis that showed the emission control programs proposed for the valley were at least as stringent, if not more so, than control programs implemented in other nonattainment areas.

In 2014, EPA redesignated the Las Vegas Valley to attainment status and approved a ten-year PM<sub>10</sub> maintenance plan<sup>53</sup> that set forth Clark County's commitment to continue to enforce the stringent BACM-based mitigation measures developed for the 2001 PM<sub>10</sub> SIP.

#### 3.1.2 Ozone Precursor Emission Sources

The ten-year ozone maintenance plan compiled in 2011 set forth the following permanent and enforceable ozone precursor emissions reduction control measures: (i) federal Tier 2 vehicle emissions standards,<sup>54</sup> (ii) the federal highway diesel rule,<sup>55</sup> (iii) the federal large non-road diesel engines rule,<sup>56</sup> (iv) non-road spark-ignition engines and recreational engines standards,<sup>57</sup> (v) federal non-road spark-ignition engines and equipment standards,<sup>58</sup> (vi) the Nevada vehicle inspection and maintenance (I/M) program,<sup>59</sup> and (vii) Clark County stationary point and nonpoint source AQRs (Sections 12.0–12.13 (stationary sources), 14 (NSPS), 28 (fuel-burning equipment), 32 (reduction in animal matter), 33 (chlorine in chemical processes), 42 (open burning), 45 (idling of diesel-powered motor vehicles), 50 (storage of petroleum products), 51 (petroleum product loading into tank trucks and trailers), and 53 (oxygenated gasoline program)).<sup>60</sup>

Since 2011, EPA has strengthened some of these federal rules, most notably issuing the Tier 3 rule in 2014.<sup>61</sup> This rule established more stringent vehicle emissions standards, as well as reductions in the sulfur content of gasoline. Beginning in 2017, the rule reduced exhaust and evaporative emissions by addressing vehicle and fuel as a system.<sup>62</sup> The Tier 3 rule includes new requirements for both light and heavy-duty vehicles. The exhaust standards include different phase-in schedules that vary based on vehicle class. The gasoline fuel standard will reduce the sulfur content from the current 30 ppm average down to a 10 ppm average, and will enable catalytic converters to operate more efficiently.

The impact of the Tier 3 rule is significant. EPA anticipates that by 2030 (i.e., when Tier 3 vehicles will make up the majority of the fleet and vehicle miles traveled), the vehicle emissions standards, combined with reductions of gasoline sulfur content, will result in NO<sub>x</sub> and volatile organic compound (VOC) vehicle emissions reduction of about 21 percent and carbon monoxide

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<sup>&</sup>lt;sup>53</sup> 79 FR 60078. The maintenance plan is available at: <a href="http://www.clarkcountynv.gov/airquality/plan-ning/Pages/StateImplementationPlans.aspx">http://www.clarkcountynv.gov/airquality/plan-ning/Pages/StateImplementationPlans.aspx</a>.

<sup>&</sup>lt;sup>54</sup> 65 FR 6822.

<sup>&</sup>lt;sup>55</sup> 66 FR 5001.

<sup>&</sup>lt;sup>56</sup> 69 FR 38958.

<sup>&</sup>lt;sup>57</sup> 65 FR 76789.

<sup>&</sup>lt;sup>58</sup> 73 FR 59034.

<sup>&</sup>lt;sup>59</sup> NRS 445B and NAC 445B.

<sup>60</sup> http://www.clarkcountynv.gov/airquality/regulations/Pages/Rules CurrentRulesandRegulations.aspx

<sup>61 79</sup> FR 23414 (April 28, 2014).

<sup>&</sup>lt;sup>62</sup> *Id.* at 23417.

emissions reductions of about 24 percent. 63 Most of the ozone precursor emissions reduction within Clark County will accrue as a result of this rule, since highway vehicles are the most significant source of NO<sub>x</sub> emissions.

#### 3.1.3 PM<sub>2.5</sub> Emission Sources

AQR Section 45 limits diesel-powered motor vehicles to no more than 15 consecutive minutes of idling. The regulation exempts diesel trucks, buses, and non-emergency vehicles under certain situations, such as vehicle repair, and does not apply to emergency vehicles. DAQ also participates in the Department of Motor Vehicles Smog Spotter program by providing a link on its website that allows the public to report smoking vehicles.

In 1990, Clark County addressed emissions from residential wood combustion by passing an ordinance to restrict certain construction of wood-burning fireplaces.<sup>64</sup> These restrictions were incorporated into Section R1007 of the 2012 International Residential Code for HA 212.65 The county's residential building code restricts construction of solid-fuel burning fireplaces in any residential dwelling in the Las Vegas Valley and Boulder City urban areas at an elevation of less than 4,000 feet above sea level unless it is one of the following: (i) a dedicated solid-fuel-burning factory-built enclosed fireplace or factory-built heater that conforms to the Phase II EPA NSPS for new residential heaters pursuant to 40 CFR 60, Subpart AAA, or (ii) a masonry fireplace, masonry heater, or factory-built fireplace, all of which must include a wood-burning insert meeting certain standards or use gas logs approved by the building official with a fireplace opening that is enclosed with a cover of solid glass, steel, or cast iron.<sup>66</sup>

In 2001, Clark County enacted several control measures limiting paved road dust emissions. AQR Section 93 specifically addresses paved road emissions, and applies to the areas of Clark County with the highest density of paved roads. The regulation requires four feet of paved or stabilized shoulders on each side of the paved travel section, widening to eight feet where right-ofway is available if vehicular traffic is greater than or equal to 3,000 vehicles per day. Street sweeper and crack seal equipment requirements are also included. AQR Section 94 provides control requirements for mud tracked out from construction sites onto paved road surfaces.

Clark County also enacted control measures to limit dust emissions from unpaved roads, alleys, and easements. AQR Section 91 set forth a series of control measures for unpaved roads with vehicular traffic equal to or exceeding 150 vehicles per day. The regulation also established stabilization test methods to determine whether unpaved surfaces were sufficiently stabilized. Other controls for particulate matter emissions are described in Section 3.1.1, "PM<sub>10</sub> Emission Sources."

<sup>&</sup>lt;sup>63</sup> *Id*.

<sup>&</sup>lt;sup>64</sup> Clark County Ordinance No. 1249 (Nov. 6, 1990). Also see Appendix R of the PM<sub>10</sub> SIP.

<sup>65</sup> http://www.clarkcountynv.gov/building/plan-review/Building%20Codes/2012\_IRC\_Amendments.pdf

<sup>&</sup>lt;sup>66</sup> Southern Nevada Amendments to the 2012 International Residential Code, Section R1007.1 (adopted by the BCC on Aug. 20, 2013; effective July 7, 2014; http://www.clarkcountynv.gov/building/plan-review/Building%20Codes/2012 IRC Amendments.pdf.

### 3.2 METHODS TO MINIMIZE PUBLIC EXPOSURE TO HIGH CONCENTRATIONS

40 CFR Part 51.930(b)(2)(ii)(B) requires methods to minimize public exposure to high concentrations of identified pollutants during exceptional events.

#### 3.2.1 Minimizing PM<sub>10</sub> Exposure During High-wind Events

The AQRs require construction site supervisors, dust monitors, and water truck operators to attend air quality dust classes, held twice a month.<sup>67</sup> Attendees are informed of the heightened mitigation requirements imposed on the regulated community when construction dust advisories are issued.

When an advisory is issued, DAQ compliance inspectors provide an increased presence at construction sites and some stationary sources, performing a number of compliance and enforcement functions, including (i) documenting the application of BACM on sites complying with dust control permit conditions and regulations, (ii) surveying assigned areas for sites with blowing dust, (iii) conducting on-site evaluations to determine if soils are stable or unstable, (iv) performing required field tests, (v) completing construction site inspection forms, (vi) taking digital photos showing the extent of unstable soils and blowing dust, (vii) conducting surveillance of stationary sources to determine compliance with permit conditions related to controlling dust emissions, and (viii) checking historically disturbed sites to ensure they are not contributing additional dust, even if wind speeds are low.

At the discretion of the compliance officer, alleged violators are issued a "Notice of Noncompliance" or "Notice of Violation," as appropriate. Sources are asked to employ BMPs to correct any violations. Historical patterns, monitoring data, and citizen complaints are taken into consideration in all enforcement actions.

#### 3.2.2 Minimizing Ozone Exposure During Wildfire Events

A wildland fire is any non-structure fire that occurs in forests, scrublands, grasslands, or marshlands. There are two types: wildfires (unplanned) and prescribed fires (intentionally ignited for land management purposes).<sup>68</sup> Since wildfires are unplanned, methods to minimize public exposure to high concentrations of pollutants are addressed largely through fire suppression. However, public notification and education can also play a role, as described in Section 2.

Prescribed fires in Clark County fall under the category of "open burning," which the Clark County Fire Department and DAQ closely regulate to prevent prescribed fires from turning into wildfires.<sup>69</sup> Open burning includes agricultural burns of the unused portions of crops and intermingled weeds in agricultural operations, prescribed burns for wildlife management practices, and open burns to control disease or pests.

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<sup>67</sup> http://www.clarkcountynv.gov/airquality/pages/default.aspx

<sup>&</sup>lt;sup>68</sup> EPA, DOI, and USDA, Wildland Fire and Air Quality (April 2016).

<sup>&</sup>lt;sup>69</sup> Clark County Fire Code - Section 307, and AQR Section 42.

To prevent out-of-control prescribed fires, and to conduct open burning in general, a permittee must first submit plans and pay all fees associated with the permit process. Once a permit has been approved, the permittee must schedule a fire inspector to verify the burning site and validate the permit. The permittee must also complete DAQ's Open Burning Application & Notification form. All open burnings are tracked by the department and restricted when wind speeds are excessive.<sup>70</sup>

Approximately 90 percent of Clark County land is federal land. Table 2 lists the federal government agencies that administer these lands. 71 Clark County relies on interagency cooperation and the robust open burning permit process, in lieu of a formal smoke management plan, to mitigate excessive emissions due to prescribed burning.

Agency	Approximate Acreage	Percent of County
Bureau of Land Management	2,900,000	57%
National Park Service	587,000	12%
U.S. Fish and Wildlife Service	493,000	9%
Nevada Test and Training Range	360,362	6%
USDA Forest Service	252,000	5%
Bureau of Reclamation	50,700	< 1%
Nellis Air Force Base	14,161	< 1%
Creech Air Force Base	2,300	< 1%
Totals:	4,659,523	~ 90%

Table 2. Federal Agency Land Ownership in Clark County

Clark County is located in the Mojave Desert, the driest area in the United States. The average annual rainfall over the last 30 years was 4.19 inches per year, 89 percent less than the nation-wide average. Except for some riparian areas and higher-elevation forests, the majority of the county does not have the type of forest, scrubland, grassland, or marshland growth that would support extensive wildfire events. The majority of wildfires that have influenced air quality data within Clark County have been located outside the county's boundaries.

#### 3.2.3 Minimizing PM<sub>2.5</sub> Exposure During Wildfire and Fireworks Events

The same mitigation measures used to minimize ozone exposure during wildfire events and to minimize PM<sub>10</sub> exposure during high-wind events apply to the minimization of PM<sub>2.5</sub> exposure during wildfire and fireworks events.

#### 3.3 PROCESSES TO COLLECT AND MAINTAIN DATA PERTINENT TO EVENT

<sup>&</sup>lt;sup>70</sup> Clark County Fire Prevention Guideline, "Open Burning in Unincorporated areas of Clark County."

<sup>&</sup>lt;sup>71</sup> Agency and acreage values taken from "Clark County Federal Lands Report," Clark County Department of Comprehensive Planning (5/22/13).

40 CFR Part 51.930(b)(2)(ii)(C) requires processes to collect and maintain data pertinent to an exceptional event, i.e., to identify (i) the data to be collected, (ii) the party responsible for collecting and maintaining the data, and (iii) when, how, and to whom the data will be reported.<sup>72</sup> These processes are described in Section 4 of AQP-018 (Appendix B).

#### 3.4 MECHANISMS TO CONSULT WITH OTHER AIR QUALITY MANAGERS

40 CFR Part 51.930(b)(2)(ii)(D) requires mechanisms to consult with other air quality managers in the affected area regarding the appropriate responses to abate and minimize impacts. In promulgating the 2016 Exceptional Events Rule, EPA clarified the meaning of "air quality managers," stating: "Consultation could include collaboration between potentially affected local, state, tribal and federal air quality managers and/or emergency response personnel."<sup>73</sup>

Past exceptional events demonstrations submitted by DAQ show how the affected area can often extend beyond the boundaries of Clark County into other states; Arizona and California are often impacted by the same wildfire or high-wind events. Figure 2 illustrates the common interest in addressing high-wind events by showing the proximity of PM<sub>10</sub> nonattainment and maintenance areas. Given a shared interest in collaborating on exceptional events issues, air quality managers from these states have formed the Southwest Exceptional Events Working Group. The group includes EPA Region 9 representation and teleconferences quarterly, or more frequently if needed.

<sup>&</sup>lt;sup>72</sup> 81 FR 68216, 68273.

<sup>73</sup> This suggests that EPA contemplates consultation between other air quality managers taking place at the local, state, tribal and federal levels, depending on the boundaries of the affected area.81 FR 68211, 68273 (Oct. 3, 2016).

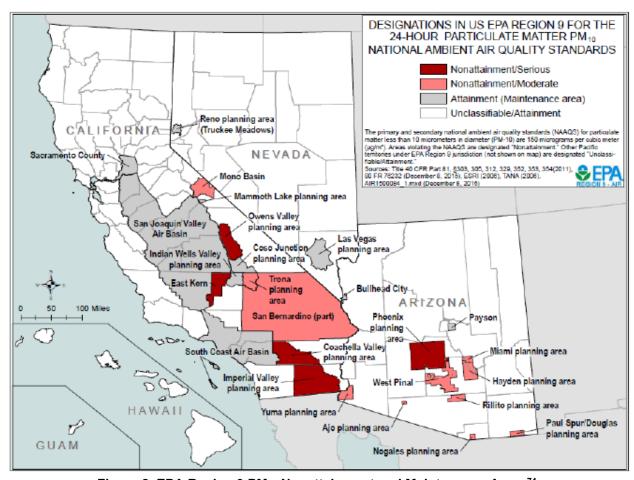


Figure 2. EPA Region 9 PM<sub>10</sub> Nonattainment and Maintenance Areas<sup>74</sup>

In addition to the teleconferences, there are open lines of communication between group members. When air quality in an area is impacted by a foreseeable or ongoing exceptional event, important information—such as the status of massive sandstorms, wildfires, wind direction, and wind speed—can be immediately sent to working group members in the affected area. The Southwest Exceptional Events Working Group serves as the primary mechanism for consultation among air quality managers in affected areas.

Additionally, Clark County will continue to maintain communications with tribal air quality managers (Moapa and Paiute), federal agency air quality managers, and fire officials (both city and county).

2.2.

<sup>&</sup>lt;sup>74</sup> EPA Regional Roundup PowerPoint presentation by Matthew Lakin (Region 9) at the AAPCA 2017 Fall Business Meeting, <a href="http://www.csg.org/aapca\_site/events/2017FallMeetingPresentations.aspx">http://www.csg.org/aapca\_site/events/2017FallMeetingPresentations.aspx</a>.

## 4.0 THIRD MITIGATION PLAN COMPONENT: REVIEW AND EVALUATION

40 CFR Part 51.930(b)(2)(iii)(A) and (B) put forward various procedural requirements for promulgating the mitigation plan.

#### 4.1 DRAFT MITIGATION PLAN AVAILABILITY TO PUBLIC COMMENT

40 CFR Part 51.930(b)(2)(iii)(A)(1) requires documentation that a draft version of the mitigation plan was made available for public comment for a minimum of 30 days. Public feedback will strengthen mitigation plans and focus air agency action in the areas most needing the attention.<sup>75</sup>

On August 30, 2018, DAQ made a draft version of this plan available for public comment for 30 days, as documented in Appendix D.

#### 4.2 PUBLIC COMMENTS AND AGENCY RESPONSES

40 CFR Part 51.930(b)(2)(iii)(A)(2) requires that an agency submit the mitigation plan and all comments received during the public comment period to the EPA administrator. The comments are included in Appendix D. 40 CFR Part 51.930(b)(2)(iii)(A)(3) requires that air agencies respond, and explain their response, to each public comment on the initial mitigation plan. Appendix D contains DAQ responses to all public comments, as well as explanations of changes made or not made as a result of DAQ's review and assessment.

#### 4.3 PERIODIC REVIEW AND EVALUATION OF MITIGATION PLAN

40 CFR Part 51.930(b)(2)(iii)(B) requires that an agency specify in the mitigation plan the periodic review and evaluation process after the plan's initial review. The Clark County PM<sub>10</sub> mitigation plan will continue to maintain the same review and evaluation process as the Clark County NEAP.

Every five years, DAQ will conduct a review and evaluation and make appropriate updates to the plan. The process shall include a determination of the following:

- Adequacy of the public notification process.
- Adequacy of the public education component of the mitigation plan.
- Conditions causing violations of the PM<sub>10</sub> standard within the applicable hydrographic area.
- Status of the implementation of mitigation efforts.
- Adequacy of the mitigation efforts being implemented.

-

<sup>&</sup>lt;sup>75</sup> 81 FR 68211, 68274 (Oct. 3, 2016).

While EPA is requiring air agencies to submit public comments on their initial mitigation plans it is not requiring the agencies to submit public comments on subsequent reviews and plan reassessments. The DAQ will make that determination based on the type and extent of changes to the plan.
<sup>76</sup> Id.

## Appendix A

# Historical Treatment of Exceptional Events

#### HISTORICAL TREATMENT OF EXCEPTIONAL EVENTS

This appendix provides the timeline of EPA and congressional actions concerning the treatment of exceptional events.

#### **Pre-1986 Exceptional Events Guidelines and Considerations**

Awareness of the need to identify monitoring data influenced by exceptional events dates back to at least 1977, when OAQPS issued "Guidelines for the Interpretation of Air Quality Standards." This addressed the submission and use of all valid air quality data for determining an area's overall NAAQS compliance status.

Issue 9 in the guideline posed the following question: "How should particulate matter, carbon monoxide, and other pollutant concentrations resulting from severe recurring dust storms, forest fires, volcanic activity, and other natural sources be taken into account in determining compliance with NAAQS?" The guideline stated, "Detailed information establishing that violations are due to uncontrollable natural sources may be used in determining the feasibility of modifying control strategies."<sup>2</sup>

In 1984, EPA proposed revisions to the NAAQS for particulate matter<sup>3</sup> in which Appendix K of 40 CFR Part 50 would allow consideration of the influence of rare or unusual events on PM<sub>10</sub> data by various techniques.<sup>4</sup>

#### 1986 Issuance of Exceptional Events Guideline

In 1986, EPA issued an exceptional events guideline describing the process that state and local agencies should follow when dealing with PM<sub>10</sub> air quality data that may be eligible for the adjustments authorized under Section 2.4 of Appendix K of 40 CFR Part 50.<sup>5</sup>

#### 1990 Amendment of Clean Air Act

In 1990, Congress added Section 188(f) to the CAA and provided EPA with the authority to waive either a specific attainment date or certain planning requirements for serious PM<sub>10</sub> nonattainment areas affected by non-anthropogenic sources.<sup>6</sup>

OAQPS, Guidelines for the Interpretation of Air Quality Standards, No. 1.2-008 (rev. February 1977).

<sup>&</sup>lt;sup>2</sup> EPA-450/4-86-007, Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events, pp. 1-2 (July 1986).

<sup>&</sup>lt;sup>3</sup> 49 FR 10433 (March 20, 1984).

<sup>&</sup>lt;sup>4</sup> EPA-450/4-86-007, Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events, p. 2 (July 1986).

<sup>&</sup>lt;sup>5</sup> *Id*.

<sup>&</sup>lt;sup>6</sup> 72 FR 13559, 13562 (March 22, 2007).

#### 1996 Issuance of Natural Events Policy

In 1996, EPA issued the memorandum describing the NEP.<sup>7</sup> Under this policy, the following three categories of uncontrollable natural events were listed for possible data exclusion when determining the PM<sub>10</sub> design value of a particular area: (i) volcanic and seismic activity, (ii) wildland fires, and (iii) high-wind events.

For high-wind events, the NEP stated that ambient PM<sub>10</sub> concentrations due to dust raised by unusually high winds would be treated as uncontrollable natural events if the dust originated from non-anthropogenic sources, or if it originated from anthropogenic sources controlled with BACM.

Prior to allowing the exclusion of monitoring data impacted by a natural event under the NEP, EPA required that the state or local air agency requesting data exclusion meet several requirements, including:

- i. Public notification whenever air quality in the area is unhealthy;
- ii. Submission of all valid ambient air quality data to EPA; and
- iii. Utilization of all appropriate reasonable measures to safeguard the public health regardless of the source of  $PM_{10}$  emissions.

#### 1997 Revision of 40 CFR Part 50

In 1997, EPA issued a revised NAAQS for ozone and a new NAAQS for PM<sub>2.5</sub>. Along with issuing the NAAQS, EPA promulgated Appendices I and N to 40 CFR Part 50. These appendices, concerning ozone and PM<sub>2.5</sub>, addressed the treatment of data determined to be influenced by exceptional or natural events.

#### 2005 Natural Events Action Plan

In 2005, DAQ compiled the NEAP, which focused on high-wind events because it was believed that only high winds had caused PM<sub>10</sub> exceedances in Clark County. The NEAP was compiled in order to meet the 1996 NEP requirements and thereby provide Clark County an opportunity to request exclusion of PM<sub>10</sub> monitoring data collected during applicable high-wind events. The area of applicability of the Clark County NEAP included both the Las Vegas Valley (HA 212) and the Apex Valley (HAs 216 & 217). Upon EPA finding this exceptional event document complete, DAQ staff will recommend that the BCC rescind the outdated NEAP in order to avoid potential confusion on what procedures are applicable to exceptional events.

The NEAP provided documentation about DAQ's participation in (i) public outreach and education activities, (ii) public notification of air quality information and air quality advisory issuance, (iii) utilization of BACM to reduce windblown dust from anthropogenic sources, (iv) compliance efforts to enforce the AQRs, (v) standardizing information necessary to justify the

<sup>&</sup>lt;sup>7</sup> EPA, Memorandum from Mary D. Nichols, "Areas Affected by PM-10 Natural Events" (May 30, 1996).

<sup>&</sup>lt;sup>8</sup> 62 FR 38856 (July 18, 1997).

<sup>&</sup>lt;sup>9</sup> NEAP, p. 1 (April 2005).

exclusion of PM<sub>10</sub> monitoring data, (vi) stakeholder involvement, (vii) NEAP technical committee/working group public review and comment of the plan, and (viii) scheduling periodic evaluations of the plan.

#### 2005 Amendment of Clean Air Act

Also in 2005, Congress passed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. <sup>10</sup> Though the Act largely focused on transportation issues, it also included a section that encompassed many of the ideas and principles that EPA had formulated over decades to deal with monitoring data influenced by exceptional events. The Act amended Section 319 of the CAA and defined an exceptional event as one that:

- i. affects air quality;
- ii. is not reasonably controllable or preventable;
- iii. is an event caused by human activity that is unlikely to recur at a particular location or a natural event; and
- iv. is determined by the Administrator through the process established in the regulations promulgated to be an exceptional event.

Excluded from this definition were events caused by a stagnation of air masses or meteorological inversions; meteorological events involving high temperatures or lack of precipitation; or air pollution relating to source noncompliance.

The Act directed the EPA to promulgate regulations that would at a minimum provide that:

- i. The occurrence of an exceptional event must be demonstrated by reliable, accurate data that is promptly produced and provided by Federal, State, or local government agencies;
- ii. A clear causal relationship must exist between the measured exceedances of a national ambient air quality standard and the exceptional event to demonstrate that the exceptional event caused a specific air pollution concentration at a particular air quality monitoring location;
- iii. There is a public process for determining whether an even is exceptional; and
- iv. There are criteria and procedures for the Governor of a State to petition the Administrator to exclude air quality monitoring data that is directly due to exceptional events from use in determinations by the Administrator with respect to exceedances or violations of the national ambient air quality standards.<sup>11</sup>

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<sup>&</sup>lt;sup>10</sup> Public Law 109-59, Sec. 6013 (Aug. 10, 2005).

<sup>&</sup>lt;sup>11</sup> CAA § 319(b)(3)(B).

The Act also provided a set of principles for the EPA administrator to follow when promulgating regulations, patterned after the guiding principles included in EPA's 1996 NEP:

- i. Protection of public health is the highest priority;
- ii. Timely information should be provided to the public in any case in which the air quality is unhealthy;
- iii. All ambient air quality data should be included in a timely manner, an appropriate Federal air quality database that is accessible to the public;
- iv. Each State must take necessary measures to safeguard public health regardless of the source of the air pollution; and
- v. Air quality data should be carefully screened to ensure that events not likely to recur are represented accurately in all monitoring data and analyses.<sup>12</sup>

#### 2007 Exceptional Events Rule

In 2007, EPA proceeded to promulgate the Exceptional Events Rule to govern the review and handling of certain air quality monitoring data for which the normal planning and regulatory process is not appropriate. Under the rule, EPA could exclude monitored exceedances of a NAAQS from consideration to avoid designating an area as nonattainment, redesignating an area as nonattainment, or reclassifying an existing nonattainment area to a higher classification if a state adequately demonstrates that an exceptional event caused an exceedance or violation of a NAAOS.<sup>13</sup>

EPA also required states to take reasonable measures to mitigate the impacts of an exceptional event.<sup>14</sup> States had to flag data influenced by an exceptional event in AQS, provide notice and an opportunity for public comment, and submit a demonstration to justify the exclusion before EPA could exclude data from regulatory determinations.

#### 2016 Exceptional Events Rule

In 2016, EPA amended the Exceptional Events Rule promulgated in 2007. Among the revisions was a requirement for states to develop an exceptional events mitigation plan in areas with historically documented or known seasonal exceptional events, in accordance with the provisions of 40 CFR Part 51.930(b).

EPA stated in the rule that it believed two years was a reasonable amount of time to prepare comprehensive mitigation plans that respond to the public health threat presented by historically documented or know seasonal events. <sup>16</sup> EPA specified that it will not concur with certain exceptional events demonstrations if an air agency has not submitted a mitigation plan within two years of the effective date of the final rule concerning guidance on the treatment of data

<sup>&</sup>lt;sup>12</sup> Public Law 109-59, Sec. 6013 (Aug. 10, 2005).

<sup>&</sup>lt;sup>13</sup> 72 FR 13559, 13560 (March 22, 2007).

<sup>14</sup> Id.

<sup>&</sup>lt;sup>15</sup> 81 FR 68216 (Oct. 3, 2016).

<sup>&</sup>lt;sup>16</sup> *Id.* at 68274.

influenced by exceptional events.<sup>17</sup> The effective date of the final rule was September 30, 2016.<sup>18</sup> Therefore the deadline for submitting a mitigation plan is September 29, 2018. For the period prior to September 29, 2018, EPA stated that it "will process events of the type and pollutant that are the subject of the mitigation plan that occur during this 2-year period following the general provisions outlined in 40 CFR 50.14." EPA added that "[d]uring this interim period, the EPA's concurrence on demonstrations will not be contingent upon the affected air agency's submittal of a mitigation plan because air agencies should have sufficient time to develop their newly required mitigation plans. It is not reasonable to delay acting on demonstration submittals while air agencies prepare these plans."

<sup>&</sup>lt;sup>17</sup> *Id*. at 68218.

<sup>&</sup>lt;sup>18</sup> *Id.* at 68216.

<sup>&</sup>lt;sup>19</sup> *Id.* at 68274.

<sup>&</sup>lt;sup>20</sup> *Id*.

# Appendix B

AQP-018.R0, Exceptional Events

#### DEPARTMENT OF AIR QUALITY PROCEDURE

#### AQP-018.R0

#### PREPARING FOR AND RESPONDING TO EXCEPTIONAL EVENTS

Revision 0

August 9, 2018

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AQP-018.R0

#### Exceptional Events

#### Effective Date: 8/15/2018

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#### ACRONYMS AND ABBREVIATIONS

<u>Acronyms</u>

AQI Air Quality Index AQS Air Quality System

BACM Best Available Control Measures CFR Code of Federal Regulations

DAQ Clark County Department of Air Quality EPA U.S. Environmental Protection Agency

LEADS Leading Environmental Analysis and Display System

ManVal Manual Validation

NAAQS National Ambient Air Quality Standards PIA DAQ Public Information Administrator PIO Clark County Public Information Officer

QA quality assurance

USG Unhealthy for Sensitive Groups

#### Abbreviations

mph miles per hour

 $PM_{10}$  particulate matter with a mean aerodynamic diameter of 10 microns or less  $PM_{2.5}$  particulate matter with a mean aerodynamic diameter of 2.5 microns or less

#### 1.0 SCOPE/APPLICABILITY

This procedure describes the processes required to prepare for and respond to an exceptional event within Clark County, in conformance with Title 40, Part 51.930 of the Code of Federal Regulations (40 CFR 51.930). It outlines staff roles, responsibilities, and activities before, during, and after an exceptional event, and the training necessary to prepare for an event.

This procedure applies to all Clark County Department of Air Quality (DAQ) employees tasked with preparing for and responding to exceptional events, including preparation of exceptional event demonstration packages.

#### 2.0 DEFINITIONS

**Advisory:** A written notification typically communicated electronically and issued when forecast conditions are favorable for pollutant levels to exceed the National Ambient Air Quality Standards (NAAQS) i.e., when the air quality conditions are, at a minimum, Unhealthy for Sensitive Groups (USG) on the U.S. Environmental Protection Agency's (EPA's) Air Quality Index (AQI)—or when high pollutant levels are apparent to the public even if the AQI levels only reach the Moderate level.

**Air Quality Index (AQI):** A system developed by the U.S. Environmental Protection Agency (EPA) to uniformly characterize levels of the major air pollutants regulated under the Clean Air Act. It comprises-six ranges: Good (0-50), Moderate (51-100), Unhealthy for Sensitive Groups (101-150), Unhealthy (151-200), Very Unhealthy (201-300), and Hazardous (301-500).

**Air Quality System (AQS):** An EPA database that contains measurements of criteria and hazardous air pollutant concentrations in all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

**Alert:** A written notification that is typically communicated electronically when air quality levels are expected to reach the Unhealthy level or higher on the AQI, or when high pollutant levels are apparent to the public even if AQI levels may only reach the USG level.

Best available control measures (BACM): The most effective measures for controlling fugitive particulate matter (PM) emissions, according to EPA guidance.

Construction Notice: A notice issued at predicted wind speeds below the dust advisory levels, that directs permittees to immediately inspect their sites, employ BACM, and avoid blasting operations at threshold wind speeds. It also informs recipients that compliance officers will inspect sites to ensure BACM is being implemented.

**Data flag for exceptional events:** Special data qualifier code from a list of exceptional event categories used to flag data submitted to AQS and to request its exclusion of the data.

**EnviroFlash:** An EPA system that sends daily e-mails containing air quality forecast information.

**Exceptional event:** An event that (1) affects air quality, (2) is not reasonably controllable or preventable, (3) is caused by human activity unlikely to recur at a particular location, or (4) is a natural event, and that is determined by the EPA administrator to be an exceptional event in accordance with 40 CFR 50.14. Exceptional events include, but are not limited to, high-wind, transported dust, wildfire, and fireworks events.

Informational flag (I-flag): Data code from a list of codes that provides information on data entered into AQS.

Leading Environmental Analysis and Display System (LEADS): DAQ's primary data management tool for continuous monitoring.

Manual Validation (ManVal): A database query tool that staff can use to view data, and to flag any suspect data by applying appropriate flags and justifying data validation.

**Preliminary indication of an exceedance:** A value in LEADS that exceeds the NAAQS before field checks, audits, and data validation are conducted.

**Request flag (R-flag):** Special data qualifier code from a list of exceptional event categories used to flag data submitted to AQS and request its exclusion for regulatory purposes.

Verified exceedance: A value in AQS that exceeds the NAAQS after field checks, required audits, and data validation are conducted.

#### 3.0 ROLES AND RESPONSIBILITIES

This section details the roles and responsibilities of DAQ staff and management in preparing and responding to exceptional events. Specific responsibilities are described in detail in Section 4.0, "Procedures."

There are two general categories of health-based notifications issued by DAQ and Clark County: advisories and alerts. The focus of the advisory and alert processes is to provide prompt notification to affected or potentially affected communities whenever air quality concentrations exceed or are expected to exceed an applicable NAAQS. Advisories and alerts generally fall into one of the following categories, or a combination thereof: Dust Advisory/Alert, Fine Particulate Matter Advisory/Alert, Seasonal Ozone Advisory, Ozone Advisory/Alert, and Smoke Advisory/Alert. All advisories and alerts are primarily health-based notifications and are issued to the school district, health district, parks and recreation departments, local municipalities, local media, and interested members of the general public. Advisories and alerts include educational material and tips on how to limit exposure and mitigate emissions.

Construction Notices are issued at lower-level wind thresholds than Dust Advisories to dust control permit holders, contractors, and selected stationary sources and are primarily mitigation-

based proactive measures. Constructions Notices are not public announcements of potential health risks, nor do they involve action of the PIA or PIO. After a Construction Notice is issued, a general advisory or an alert may be issued if changing weather conditions elevate the concern to health-based. During such instances, dust control permit holders, contractors, and selected stationary sources are issued a tailored form of the public advisory/alert with language specifically tailored to their operations and dust abatement requirements

#### 3.1 Department Director

The director (or designee) will review and approve this procedure. It will be the director's responsibility to ensure department-wide implementation of, and adherence to, this procedure. When division managers are unavailable, the director will be responsible for approving the issuance or updating of an advisory or alert.

#### 3.2 Monitoring Division

#### 3.2.1 Monitoring Division Manager

The Monitoring Division manager is the primary approving authority for the issuance of an advisory or alert. If required, the manager (or designee) shall serve as the DAQ spokesperson during an exceptional event and follow the guidance in ADM-010, "News Media Policy."

#### 3.2.2 Monitoring Division Staff

Monitoring Division staff are responsible for the following tasks, as assigned:

- Monitoring weather and pollutant data, forecasting pollutant AQI levels for morning posts
  to the DAQ and EPA AirNow websites, posting updates throughout the day as necessary,
  and determining the potential severity of an event.
- Coordinating with the Clark County Public Information Officer (PIO) and the DAQ Public Information Administrator (PIA) on preparing, issuing, updating, and posting advisories and alerts.
- Coordinating with the Compliance and Enforcement Division on the merits of issuing a Construction Notice or Dust Advisory/Alert.
- 4. Making recommendations to the Monitoring Division manager on the issuance of advisories and alerts.
- 5. Performing audits as needed.
- 6. Confirming monitoring site exceedances recorded during an event, providing a final quality check of exceedance data, and flagging the data in AQS.
- Collaborating with Planning Division staff in developing meteorological analyses of exceptional events.

#### 3.3 Compliance and Enforcement Division

#### 3.3.1 Compliance and Enforcement Division Manager

The Compliance and Enforcement Division manager (or designee) is responsible for:

- Coordinating with the Dust/Asbestos Section supervisor and the Monitoring Division air quality forecaster on the necessity of issuing a Construction Notice or an advisory/alert during dust events.
- 2. Ensuring, through the Dust/Asbestos Section supervisor, that if a decision is made to issue a Construction Notice, it is e-mailed to all Dust Control Permit holders, contractors, and selected stationary sources with included language directing recipients to forward the notice to all applicable supervisors, foremen, and subcontractors working on a construction project or at the stationary source.
- 3. Ensuring, through the Dust/Asbestos Section supervisor, that if a decision is made to issue a Dust Advisory/Alert, a tailored form of that public advisory/alert shall be e-mailed to all Dust Control Permit holders, contractors, and selected stationary sources with language directing recipients to forward the advisory/alert to all applicable supervisors, foremen, and subcontractors working on a construction project or at the stationary source.
- Deploying compliance officers to the field during a dust event to focus surveillance and enforcement activities on sources of fugitive dust and to gather documentation, such as photos, videos, and inspections.

#### 3.3.2 Compliance and Enforcement Division Staff

Compliance and Enforcement Division staff are responsible for the following tasks, as assigned:

- Conducting field inspections of potentially violating sources before and during a forecasted dust event.
- 2. Issuing alleged violators a Notice of Noncompliance, Warning Notice, or Notice of Violation, as warranted, and requesting sources employ best management practices to correct the alleged violation(s).
- Ensuring that inspection forms and other documentation contain site-specific information related to field enforcement activities, including observations made, actions taken, directions given, response effectiveness, and outcomes.

#### 3.4 Planning Division

#### 3.4.1 Planning Division Manager

The Planning Division manager (or designee) is responsible for:

- Informing the Monitoring Division manager, (or designee) of samples needed during fireworks displays and other smoke events.
- 2. Determining which filter samples will be sent out for laboratory analysis.
- 3. Informing the Compliance and Enforcement Division manager, (or designee) of unique or event-specific documentation that may be needed for a demonstration package.
- 4. Ensuring that exceptional event demonstration packages are assembled and submitted to EPA within the regulatory time frame after occurrence of an exceptional event.
- 5. If required, serving (or appointing a Planning staff member to serve) as DAQ spokesperson during an exceptional event and following ADM-010 accordingly.
- Reporting the status of exceptional event demonstration packages to the department director as a metric.

#### 3.4.2 Planning Division Staff

Planning Division staff are responsible for the following tasks, as assigned:

- Collaborating with the Monitoring Division in developing meteorological analyses. This
  includes informing the air quality forecaster of the scope and level of detail required for the
  meteorological portion of an exceptional event demonstration package, although it is up to
  Planning Division staff to determine what is ultimately included in a package.
- 2. Requesting and approving I-flags and R-flags.
- 3. Preparing reports and exceptional event demonstration packages.
- Maintaining a table that tracks exceedance events, exceptional events (with summary), the status of exceptional events, and exceptional event demonstration packages.
- Reporting the status of exceptional event demonstration packages to the Planning Division manager.

#### 3.5 Public Information Administrator and Clark County Public Information Officer

The PIA is responsible for coordinating media and public requests for information. During an exceptional event, the PIA will coordinate with the air quality forecaster to get advisories and alerts to the department director, the PIO, and local media. The PIA may serve as spokesperson for an exceptional event in Clark County, with ADM-010 as a key resource. The PIO will coordinate the release of advisories and alerts to the media, along with media interview requests.

#### 3.6 Author

The author will carefully consider all reviewer comments and incorporate them as applicable before finalizing the procedure.

#### 4.0 PROCEDURE

#### 4.1 Issuance of Advisories and Alerts

This section lists the steps for ensuring that DAQ notices and advisories/alerts are issued in a timely manner and standard format.

#### 4.1.1 Templates

- The Planning Division manager or designee, shall work with the PIA and/or the PIO to develop templates for advisories and alerts.
- 2. All advisories and alerts issued to the public shall include the following elements, which are intended to educate affected or potentially affected communities on actions to reduce exposure to elevated pollutant concentration levels during and after an exceedance:
  - a. A Clark County logo, header, and footer provided by the PIO.
  - b. Issuance date and effective period of the advisory or alert.
  - Educational statement on the health impact of the pollutant(s), followed by a statement advising sensitive individuals to consult a doctor.
  - A statement on air quality conditions, with a link to the forecast page of the DAQ website.
  - A brief description of the AQI and a statement encouraging the public to subscribe to the EnviroFlash service, with an embedded link.
  - f. Measures the public can take to reduce exposure and mitigate the effects of the pollutant(s) involved.

#### 4.1.2 Before Issuance

- The PIA shall coordinate with the PIO before issuing advisories/alerts to the public and media.
- When forecasted wind conditions predict, at a minimum, sustained wind speeds of 20 miles per hour (mph) or frequent wind gusts of 30 mph, the air quality forecaster shall coordinate with the Dust/Asbestos Section supervisor on the necessity of issuing a Construction Notice to Dust Control Permit holders, contractors, and stationary sources. Other factors to consider include average soil moisture content and loose soil reservoir depletion.
- 3. When forecasted wind conditions predict, at a minimum, sustained speeds of 25 mph or frequent gusts of 40 mph, or when fine dust is brought into the valley but winds have diminished, the air quality forecaster shall coordinate with the Dust/Asbestos Section supervisor on the necessity of issuing a **Dust Advisory/Alert**, pending management approval.

Other factors to consider when determining whether to issue a Dust Advisory include average soil moisture content and loose soil reservoir depletion.

- For all other pollutant advisories/alerts, the air quality forecaster shall determine the appropriateness of issuance.
- 5. Advisories shall be issued only when it is reasonably certain that forecasted conditions may cause air quality levels to exceed the NAAQS (i.e., to reach or exceed the AQI USG level), or when high pollutant levels are apparent to the public even if AQI levels only reach the Moderate level.
- 6. Alerts shall be issued only when it is reasonably certain that forecasted conditions may cause or are causing air quality levels to reach the AQI Unhealthy level or higher, or when high pollutant levels are apparent to the public even if AQI levels only reach USG levels.
- Seasonal ozone advisories and holiday firework event advisories shall be issued in a timely manner.
- 8. The air quality forecaster shall draft all notices and advisories/alerts using approved templates.
- 9. The air quality forecaster shall submit a draft advisory/alert to the Monitoring Division manager for approval. If the Monitoring Division manager is unavailable, then one of the following managers, in the order listed, must approve the issuance:
  - a. Compliance and Enforcement Division
  - b. Planning Division
  - c. Permitting Division
  - d. Department director.
- 10. The air quality forecaster shall provide the PIA a copy of the approved advisory/alert for review and comment. If the PIA is unavailable to coordinate with the PIO, the air quality forecaster shall coordinate directly with the PIO.
- 11. The air quality forecaster shall advise the Dust/Asbestos Section supervisor of the issuance of an advisory/alert, including the expected duration and wind speeds, after providing the PIA/PIO a copy of the approved advisory/alert.

#### 4.1.3 <u>During Issuance</u>

- 1. After approval of an advisory/alert, the PIA will provide it to the following, at a minimum:
  - a. Clark County School District
  - b. Southern Nevada Health District
  - c. Clark County Department of Parks and Recreation

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- d. Cities of Las Vegas, Henderson, North Las Vegas, and Boulder City
- e. Local media (radio and television)
- f. Social media.
- 2. The PIA will notify all DAQ staff when issuing an advisory/alert.

#### 4.1.4 After Issuance

- 1. The air quality forecaster shall:
  - Notify the Dust/Asbestos Section supervisor when a manager has approved the issuance of a Dust Advisory/Alert.
  - Post the advisory/alert on the DAQ website's monitoring page, updating the forecast and comment block if needed.
  - Update the EPA AirNow forecast page to match anticipated pollutant levels, if necessary.
  - d. Prepare a manual e-mail distribution through EnviroFlash.
  - Store copies of the advisory/alert on the DAQ website and in appropriate network folders for future documentation.
  - f. Observe air quality concentration levels throughout the event to see if the duration or description in the advisory/alert should be revised.
  - g. Obtain Monitoring Division manager approval to update the website and/or issue a new advisory/alert, and to advise the PIO of changes if (a) conditions improve so that the advisory/alert is no longer necessary, (b) conditions indicate that the duration of the advisory/alert should be extended, or (c) conditions indicate the level of the advisory/alert should be raised. If the Monitoring manager is unavailable, see Section 4.1.2.(6) for the list (in order) of managers who must approve discontinuation or revision of an advisory/alert.
- The Dust/Asbestos Section supervisor shall email Construction Notices and Dust Advisories to all Dust Control Permit holders and selected stationary sources.

#### 4.1.5 <u>Timing</u>

- Once DAQ forecasts an upcoming event, advisories/alerts should be issued as early as possible.
- 2. Recurring seasonal or event advisories should be agreed upon by the air quality forecaster, the PIA, and the PIO at least a few days prior to issuance.

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- 3. To optimize media coverage, specific advisories for developing air quality conditions should, if possible, be issued the day before the event. If this is not possible, the advisories should be issued no later than 11:00 a.m. on the day of the event.
- 4. Alerts of imminent or occurring pollutant concentrations in the Unhealthy AQI level should be released as early as possible, preferably by 11:00 a.m.

#### 4.2 Monitoring Division Duties: Data Collection

This section describes the Monitoring Division's processes to collect and maintain data pertinent to an exceptional event.

#### 4.2.1 Communication

- When informed by the air quality forecaster of conditions that may require issuing an advisory/alert, the Field Operations Section supervisor will instruct Monitoring Division staff before they leave for the field to suspend routine checks or maintenance during and immediately after the potential event.
- 2. Pursuant to Section 4.4, Planning Division staff shall determine whether exceedance data should be flagged for an exceptional event. The Field Operations supervisor shall relay this determination to the senior monitoring technician responsible for data validation before he/she submits data from the event to AQS.
- The senior monitoring technician with data validation duties shall notify the air quality forecaster and all Monitoring and Planning Division supervisors and managers when submits flagged data to AQS.

#### 4.2.2 Data Collection, Preservation, and Oversight

- 1. Monitoring field staff shall:
  - a. Refrain from routine quality control checks or other maintenance activities on instruments, samplers, and equipment during or immediately after the event to ensure uninterrupted data collection.
  - Confirm site exceedances recorded during an event and provide an initial quality check of exceedance data.
  - c. Collect manual sampler data on the event from monitoring stations.
  - d. Store PM filter-based samples collected during the event until the Planning manager or designee, decides whether to send the filters to an EPA-approved laboratory for analysis of chemical wildfire markers, fireworks markers, or other components.
  - e. If the Planning Division Manager or designee, has requested additional sampling on holidays historically associated with PM<sub>2.5</sub> exceedances in the Las Vegas Valley (e.g.,

New Year's Eve, Independence Day), collect additional filter samples for laboratory analyses independent of, but in conjunction with, required sampling schedules.

- 2. The air quality forecaster shall begin compiling additional meteorology and pollutant data as soon as possible when an exceptional event is forecast or occurs.
- As soon as practicable, but no later than two months after a Planning Division request, the
  air quality forecaster shall provide documentation on the meteorological conditions associated with an exceedance to the Planning Division for inclusion in an exceptional event
  demonstration package.
- 4. The air quality forecaster shall coordinate with assigned Planning Division staff on the content and scope of each meteorological analysis.

#### 4.2.3 Audits

The senior monitoring technician with quality assurance (QA) duties shall:

- 1. Discuss with the QA Section supervisor the appropriateness of auditing instruments that indicated exceedances, and audit each as necessary.
- Discuss any audit results with the senior monitoring technician responsible for data validation.
- 3. Conduct an audit even if only one monitoring site records a probable exceedance, unless the results of recent audits make this unnecessary.
- 4. Conduct an audit when two or more monitors indicate exceedances if the senior monitoring technician with QA audit duties and the QA Section supervisor determine one is needed.

#### 4.2.4 Data Flagging

The senior monitoring technician with data validation duties shall:

- If preliminary results (pre-audit and pre-data validation) indicate an exceedance, notify
  their supervisor which ManVal informational flags should apply. The supervisor will notify
  all Monitoring staff and the Planning manager or designee, and instruct Monitoring field
  personnel which ManVal qualifying flags and notations to apply to their sites' data and
  logs.
- 2. Verify whether an exceedance occurred after reviewing all data and audits.
- 3. If an exceedance has occurred, flag data in AQS (in accordance with consultations between Planning and Monitoring) with both informational and qualifying flags to notify EPA of DAQ's intent to exclude a potential exceptional event pursuant to 40 CFR 50.14(c)(2).

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#### 4.3 Compliance and Enforcement Division Duties: Mitigation Measures

This section describes the Compliance and Enforcement Division's role in identifying, studying, and implementing mitigation measures, including approaches to abate or minimize contributing, controllable sources of identified pollutants.

- 1. During dust-related exceptional events, compliance officers shall:
  - a. Survey assigned areas for sites with blowing dust.
  - b. Document application of BACM on sites to ensure compliance with Dust Control Permit conditions and regulations.
  - c. Conduct on-site evaluations to determine if soils are stable or unstable.
  - d. Perform required field tests, fill out construction site inspection forms, and take digital photos showing the extent of unstable soils and blowing dust.
  - Conduct site surveillance and compliance evaluations of stationary sources to determine compliance with permit conditions and regulations related to controlling dust emissions.
- Alleged violators will be issued a Notice of Noncompliance, Warning Notice, or Notice of Violation, as appropriate. Sources will be requested to employ best management practices to correct any violations. Historical patterns, monitoring data, and citizen complaints will be taken into consideration in enforcement actions.
- 3. The Dust/Asbestos Section Supervisor shall compile all field documentation after a dust event and provide it to the Planning Division as soon as practicable.
- 4. The Compliance and Enforcement Division Manager may direct, upon request of the Planning Division Manager, that officers respond in the field during transport pollution events that cause high concentrations of PM<sub>10</sub> or PM<sub>2.5</sub>, even if wind speeds are low. (Additional field enforcement will generally not be requested for high-level ozone events, wildfire smoke events, or fireworks smoke events.)

#### 4.4 Planning Division Duties: Demonstration Package Preparation

This section describes the Planning Division's role in identifying, studying, and implementing mitigation measures, including processes to collect and maintain data pertinent to an exceptional event.

The Planning manager or designee, will communicate with the Monitoring manager, or designee, for if additional PM filter-based media runs are needed during and after an exceptional event to capture PM and chemical marker data. This request shall delineate specific monitors, time frames, and days of capture.

- 2. If high PM levels result from transported dust events, the Planning manager may request enforcement activity on a case-by-case basis. This activity may consist of documenting effective controls on local sources, taking digital photos, and/or recording observations, such as predominant wind direction and the presence of local sources of fugitive dust.
- When an exceptional event occurs, Planning staff may proceed to the field to collect specific data, such as photos of problematic sites, when they believe certain areas require field documentation.
- 4. If the Planning manager, or designee, determines that a demonstration package should be prepared after an exceptional event, Planning staff shall:
  - Collect associated field data from Compliance and Enforcement Division staff and coordinate with the air quality forecaster to develop a meteorological analysis of the event.
  - b. Collect news items filed by local media regarding the exceptional event.
  - c. Prepare a brief report summarizing the event, including the associated meteorological reasoning and analysis provided by the air quality forecaster.
  - d. If they receive positive comments and a recommendation from EPA, complete the demonstration package and conduct the 30-day public comment period required by Clark County and EPA, and posting of the draft package on the DAQ website for public review.
  - e. Submit the package, including any public comments received, to EPA Region 9 in accordance with 40 CFR 50.14(c)(3).
  - f. After submittal to EPA, replace the public review drafts on the website with final versions that include both the published public notices and the documentation of public comments.

#### 4.5 Mechanisms to Consult with Other Air Quality Managers

- 1. 40 CFR Section 51.930(b)(2)(ii)(D) requires mechanisms to consult with "other air quality managers" in the "affected area" regarding the appropriate responses to abate and minimize impacts. In promulgating the 2016 Exceptional Events Rule, EPA clarified the meaning of "other air quality managers," stating, "[c]onsultation could include collaboration between potentially affected local, state, tribal and federal air quality managers and/or emergency response personnel" (81 FR 68211, 68273). Based on historical exceptional event demonstrations submitted by DAQ, the "affected area" that extends beyond the boundaries of Clark County typically includes portions of Arizona or California.
- 2. Air quality managers from EPA, Arizona, California, and Nevada participate in a Southwest Exceptional Events Working Group, which meets by teleconference quarterly (more frequently if needed). This group serves as the primary mechanism for consultation among air quality managers in regionally affected areas. When air quality in an area is affected by

a foreseeable or ongoing exceptional event, important available information, such as wind direction and speeds, can immediately be sent to working group members. In addition, Clark County will maintain a supplemental list of air quality managers who can be contacted, including tribal air quality managers (Moapa and Paiute), Bureau of Land Management air quality managers, and fire officials (city and county).

#### 4.6 Annual Training Meeting

The Monitoring Division manager (or designee) shall coordinate a meeting each February to discuss and prepare for exceptional events in the coming year.

#### 5.0 RECORDS

The steps taken in this procedure will create the following records:

Construction Site Inspection Records.

#### 6.0 ADVISORY AND ALERT RECORDS REFERENCES

The following documents were used in developing this procedure:

- 72 FR 13560. "Treatment of Data Influenced by Exceptional Events; Final Rule."
- 40 CFR Parts 50.1, 50.14, and 51.930.
- EPA 2012. "Draft Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air Quality Data Affected by High Winds under the Exceptional Events Rule."
- DAQ 2018. "Clark County Mitigation Plan for Exceptional Events."

#### 7.0 FORMS

The following news release templates associated with this procedure are available on the network drive:

- Construction notice
- Dust advisory
- Dust alert
- Fine particulate matter advisory
- Fine particulate matter alert
- · Seasonal ozone advisory
- Ozone advisory
- Ozone alert

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- Ozone/dust advisory
- Ozone/dust alert
- Smoke advisory
- Smoke alert
- Smoke/dust advisory
- Smoke/dust alert
- Smoke/ozone advisory
- Smoke/ozone alert.

**Revision History** 

No.	Date	Author	Description of Change	Affected Pages
0	8/15/18	R. Langston	Original issuance	All

#### Reviews

Rev/ Mod No.	Date	Reviewer	Comments

Page 17 of 18

APPROVALS:		
Department Director	857	Date
Compliance and Enforcement D	vivision Manager	08-08-2018 ·
Philip Wike Monitoring Division Manager	1	8-8-2018 Date
Maccy Llus Permitting Division Manager		8/9/18 Date
Muhal Planning Division Manager		8-8-2018 Date
Weed Face	ister	8 - 8 - 2018 Date
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## Appendix C

## DAQ Advisory and Alert Templates

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Air Quality Smoke Alert	
Air Quality Smoke, Ozone Advisory - Fireworks	
Air Quality Smoke, Ozone Alert - Fireworks	

#### **Air Quality Dust Advisory**



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Brager Larry Brown James B. Gibson Marilyn Kirkpatrick

Yolanda King, County Manager

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Contact: Kevin J. MacDonald Public Information Officer Phone: (702) 455-6131 Mobile: (702) 232-0931 E-mail: <u>KevMac@ClarkCountyNV.gov</u>

#### For Immediate Release

[DATE]

#### Air Quality Dust Advisory Issued for Saturday

Clark County's Department of Air Quality (DAQ) has issued a dust advisory for the [DATE], to advise residents and local construction sites of the possibility of elevated levels of blowing dust due to the forecast of high winds in our area.

Airborne dust is a form of inhalable air pollution called particulate matter or PM, which aggravates respiratory diseases. Under windy conditions people with heart or lung disease, older adults, and children may feel better staying indoors as much as possible because they could be at



greater risk from particulates, especially when they are physically active, according to the U.S. Environmental Protection Agency. Consult your physician if you have a medical condition that makes you sensitive to air pollution.

County Air Quality officials will continue to monitor conditions and will post updates on the forecast page of the DAQ website at <a href="redrock.ClarkCountyNV.qov/forecast">redrock.ClarkCountyNV.qov/forecast</a>. You can subscribe to free air quality forecasts and advisories via e-mail or text through the EnviroFlash service at <a href="www.enviroflash.org">www.enviroflash.org</a>. The EPA's Air Quality Index translates air quality data into colors to help people understand when they may experience health effects from air pollution. An AQI of 101 or more is considered a level that may be unhealthy for sensitive groups of people. Tips to limit exposure to dust include:

- Limit outdoor exertion on windy days when dust is in the air. Exercise, for example, makes you
  breathe heavier and increases the amount of particulates you are likely to inhale.
- Keep windows and doors closed.
- · Run your air conditioner inside your house and car to filter out particulates.
- · Consider changing your indoor air filters if they are dirty.
- · To keep dust down, drive slowly on unpaved roads.
- Don't take short cuts across vacant lots.
- Ride off-road vehicles in approved areas outside the urban Las Vegas Valley.
- Call Air Quality's dust complaint hotline at 702-385-DUST (3878) to report excessive amounts of blowing dust from construction sites, vacant lots or facilities

[more]

Clark County news releases may be found at <a href="https://www.ClarkCountyNV.gov">www.ClarkCountyNV.gov</a>.
You may also follow the County on more than 40 social media sites, including Facebook, Twitter, Instagram, LinkedIn, Pinterest and YouTube.

#### **Air Quality Dust Alert**



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Brager Lany Brown James B. Gibson Manilyn Kirkpatrick

Yolanda King, County Manager

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#### For Immediate Release



#### Air Quality Alert Issued For Dust

Clark County's Department of Air Quality (DAQ) has issued a dust alert from [DATE] – [DATE] due to elevated levels of dust from high winds. Officials say unhealthy levels of dust for sensitive groups of people are imminent or occurring in the local area.

Airborne dust is a form of inhalable air pollution called particulate matter or PM, which aggravates respiratory diseases. Under windy conditions people with heart or lung disease, older adults, and children may feel better staying indoors as much as



possible because they could be at greater risk from particulates, especially when they are physically active, according to the U.S. Environmental Protection Agency. Consult your physician if you have a medical condition that makes you sensitive to air pollution.

The EPA's Air Quality Index translates air quality data into colors to help people understand when they may experience health effects from air pollution. An AQI of 101 or more is considered a level that may be unhealthy for sensitive groups of people.

Tips to limit exposure to dust include:

- Limit outdoor exertion on windy days when dust is in the air. Exercise, for example, makes you
  breathe heavier and increases the amount of particulates you are likely to inhale.
- · Keep windows and doors closed.
- · Run your air conditioner inside your house and car to filter out particulates.
- · Consider changing your indoor air filters if they are dirty.
- · To keep dust down, drive slowly on unpaved roads.
- · Don't take short cuts across vacant lots.
- Ride off-road vehicles in approved areas outside the urban Las Vegas Valley.
- Call Air Quality's dust complaint hotline at 702-385-DUST (3878) to report excessive amounts of blowing dust from construction sites, vacant lots or facilities

[more]

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#### Air Quality Fine Particle (PM2.5) Advisory



## News Release

county Commission: Steve Sisolak, Chaiman Chris Giunchigliani, Vice Chair Jusan Brager Justin Brown Justin Brown Justin Kirkpatrick Justin Wealth

Yolanda King, County Manager

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For Immediate Release

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[DATE]

#### Air Quality Advisory Issued for Fine Particles

Clark County's Department of Air Quality (DAQ) has issued an air quality advisory for high levels of fine particles on [DATE], created primarily by stagnant air conditions. Air Quality officials say that small particles can aggravate respiratory diseases. PM2.5 is created by vehicle exhaust and wood smoke.



People who may be most sensitive to elevated levels of fine particles include individuals with respiratory problems, cardiac disease, young children or senior citizens. Consult your physician if you have a medical condition that makes you sensitive to air quality conditions.

#### HELPFUL TIPS TO LIMIT PERSONAL EXPOSURE TO FINE PARTICLES

- Limit outdoor exertion on days with high levels of fine particles in the air. Exercise makes you
  breathe heavier and increases the amount of particulates you are likely to inhale.
- Keep windows and doors closed.
- Consider changing your indoor air filters if they are dirty.

#### STAY UP TO DATE WITH AIR QUALITY INFORMATION

The Department of Air Quality monitors air pollution through a network of monitoring sites throughout the Las Vegas Valley. Data is collected from these sites and reported at our monitoring website:

<u>AirQuality.ClarkCountyNV.qov</u>. People can stay informed through a couple channels:

- Twitter and Facebook: Read air quality updates in your Facebook news feed or tweets. On Facebook: www.facebook.com/ClarkCountyAirQuality and Twitter: @CCAirQuality.
- EnviroFlash: Receive daily text or email messages with the latest air quality information. Learn more at <u>www.enviroflash.org</u>. Air Quality also issues advisories and alerts for ozone and other pollutants such as dust, smoke and other particulate matters.
- AIRNow: Check air quality forecasts, current conditions and the Air Quality Index (AQI) for Clark County at AIRNow's website.

#### ###

Clark County is a dynamic and innovative organization dedicated to providing top-quality service with integrity, respect and accountability. With jurisdiction over the world-famous Las Vegas Strip and covering an area the size of New Jersey, Clark is the nation's 14th-largest county and provides extensive regional services to more than 2.25 million citizens and 45.5 million visitors a year (including Mesquite, Laughlin and Primm). Included are the nation's 8th-busiest airport, air quality compliance, social services and the state's largest public hospital, University Medical Center. The County also provides municipal services that are traditionally provided by cities to about 1 million residents in the unincorporated area. Those include fire protection, roads and other public works, parks and recreation, and planning and development.

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#### **Seasonal Ozone Advisory**



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Brager Lany Brown James B. Gibson Manilyn Kirkpatrick

Yolanda King, County Manager

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Contact: Kevin J MacDonald
Public Information Officer

Phone: Mobile: E-mail: (702) 455-6131 (702) 232-0931

For Immediate Release

kevmac@ClarkCountyNV.gov [DATE]

#### Seasonal Ozone Advisory Issued Through [DATE]

The Clark County Department of Air Quality issued a season-long advisory for ground-level ozone pollution today that will be in effect from Sunday, April 1 – Sunday, Sept. 30.

Ozone is a colorless gas that exists naturally in the Earth's upper atmosphere. At ground level, ozone is a key ingredient of urban smog that can build up during the day in the hottest months of the year because of strong sunlight, hot temperatures, gasoline and chemical vapors,



and pollutants from automobiles, wildfires and regional transport. Exposure to ozone can irritate your respiratory system and cause coughing, a sore throat, chest pain and shortness of breath even in healthy people, according to the EPA.

"Through a combined effort from local agencies, industry and individuals, the air quality in Clark County continues to improve each year," said Department of Air Quality Director Marci Henson. "While we at Air Quality continue to enforce the EPA standards on ozone and other pollutants in the interest of the our residents and visitors, the people of Clark County can also play an important role in minimizing ground-level ozone."

#### HELPFUL TIPS TO REDUCE OZONE

Because cars, trucks and other vehicles are major contributors to ozone, people can follow these helpful, everyday tips to reduce ozone:

- Reduce driving combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up and don't top off your tank.
- Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

[more]

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#### Air Quality Ozone Advisory



## News Release

County Commission: Steve Sisolak, Chaiman Chris Giunchigliani, Vice Chair Susan Brager Larry Brown James B. Gibson Marilyn Kirkpatrick Jawence Weekly

olanda King, County Manager

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For Immediate Release

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[DATE]

#### Air Quality Issues Ozone Advisory for [DATE]

The Clark County Department of Air Quality issued a season-long advisory for ground-level ozone pollution today that will be in effect from [DATE] - [DATE].

Ozone is a colorless gas that exists naturally in the Earth's upper atmosphere. At ground level, ozone is a key ingredient of urban smog that can build up during the day in the hottest months of the year because of strong sunlight, hot temperatures, gasoline and chemical vapors, and pollutants from automobiles, wildfires and regional



transport. Exposure to ozone can irritate your respiratory system and cause coughing, a sore throat, chest pain and shortness of breath even in healthy people, according to the EPA.

#### HELPFUL TIPS TO REDUCE OZONE

Because cars, trucks and other vehicles are major contributors to ozone, people can follow these helpful, everyday tips to reduce ozone:

- Reduce driving combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up and don't top off your tank.
- Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- . Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

Also, if you have respiratory issues or other health concerns, consider these tips during ozone season:

- Reduce the time you are active outdoors when ozone levels are elevated, especially if you are engaged
  in a strenuous activity or have a respiratory disease.
- Schedule activities for the morning or evening when ozone levels are usually lower.
- Substitute a less intense activity walking instead of jogging, for example.
- · Always consult your doctor first for medical advice.

[more]

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#### **Air Quality Ozone Alert**



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Brager Larry Brown James B. Gibson Marilyn Kirkpatrick

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[DATE]

For Immediate Release

### Air Quality Alert Issued For Ozone

The Clark County Department of Air Quality (DAQ) issued an alert for elevated levels of ozone from [DATE] – [DATE] in the Las Vegas Valley. Today's ozone levels are potentially associated with emissions from [REASON FOR OZONE].

Officials say unhealthy levels of ozone for sensitive groups of people are imminent or occurring in the local area [GIVE SPECIFIC REGIONAL]

INFORMATION]. Under current conditions, people with lung disease such as asthma, emphysema or



chronic bronchitis, older adults, children, and active people who exercise or work vigorously outdoors may feel better staying indoors, according to the U.S. Environmental Protection Agency.

Ozone is a colorless gas that exists naturally in the Earth's upper atmosphere. At ground level, ozone is a key ingredient of urban smog that can build up during the day in the hottest months of the year because of strong sunlight, hot temperatures, gasoline and chemical vapors, and pollutants from automobiles, wildfires and regional transport. Exposure to ozone can irritate your respiratory system and cause coughing, a sore throat, chest pain and shortness of breath even in healthy people, according to the EPA.

#### HELPFUL TIPS TO REDUCE OZONE

Because cars, trucks and other vehicles are major contributors to ozone, people can follow these helpful, everyday tips to reduce ozone:

- · Reduce driving combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up and don't top off your tank.
- · Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

[more]

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#### Air Quality Smoke Alert



## News Release

County Commission: Steve Sisolak, Chaiman Chris Giunchigliani, Vice Chair Susan Brager Larry Brown James B. Gibson Manlyn Kirkpatrick

Yolanda King, County Manager

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[DATE]

#### For Immediate Release

#### Air Quality Alert Issued for Smoke

The Clark County Department of Air Quality (DAQ) has issued an alert for smoke from [DATE] – [DATE]. Due to [REASON], unhealthy levels of smoke are imminent or occurring. Residents are advised that smoky conditions are expected to continue until [DATE].

Smoke is made of small particles and other pollutants that can aggravate respiratory diseases such as bronchitis and asthma or heart disease. Consult your physician if you have a medical condition



that makes you sensitive to air quality conditions. Under today's conditions, it may be best for children, the elderly and people with respiratory and heart disease to stay indoors.

#### HELPFUL TIPS TO LIMIT PERSONAL EXPOSURE TO SMOKE

- Limit outdoor exertion on days with high levels of fine particles in the air. Exercise makes you
  breathe heavier and increases the amount of particulates you are likely to inhale.
- · Keep windows and doors closed.
- Consider changing your indoor air filters if they are dirty.

#### STAY UP TO DATE WITH AIR QUALITY INFORMATION

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- EnviroFlash: Receive daily text or email messages with the latest air quality information. Learn more at <u>www.enviroflash.org</u>. Air Quality also issues advisories and alerts for ozone and other pollutants such as dust, smoke and other particulate matters.
- AIRNow: Air quality forecasts, current conditions and the Air Quality Index (AQI) for Clark County.

#### ###

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#### Air Quality Smoke, Ozone Advisory - Fireworks



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Breger Larry Brown James B. Gibson Martiyn Kirkpatrick

olanda King, County Manager

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For Immediate Release

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kevmac@ClarkCountyNV.gov

[DATE]

#### Smoke, Ozone Advisory Issued Due to Fireworks

Clark County's Department of Air Quality (DAQ) is issuing an advisory for [DATE] – [DATE], for potentially elevated levels of smoke and ozone due to local fireworks. Air Quality officials say smoke is made of small dust particles and other pollutants that can aggravate respiratory diseases and contribute to ground-level ozone formation.

According to the U.S. Environmental Protection Agency, people who may be most sensitive to elevated levels of particulates



and ozone include individuals with respiratory problems, cardiac disease, young children or senior citizens. Consult your physician if you have a medical condition that makes you sensitive to air quality conditions.

Smoke is made of small particles and other pollutants that can aggravate respiratory diseases and contribute to ground-level ozone formation. Exposure to ozone can induce coughing, wheezing and shortness of breath even in healthy people. A seasonal ozone advisory is currently in effect.

#### SMOKE AND OZONE TIPS

- · Stay indoors when you smell or see smoke.
- Limit outdoor activity and exertion when ozone levels are elevated exercise makes you breathe
  heavier and increases the amount of particulates you may inhale.
- Keep windows and doors closed. Run your air conditioner inside your house and car. Air conditioning filters out smoke and particles.
- Change your indoor air filters if they are dirty.
- · Schedule activities for the morning or evening when ozone levels are usually lower.
- Substitute a less intense activity walk instead of jog, for example.
- · Reduce driving combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up, and don't top off your tank.
- Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

[more]

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#### Air Quality Smoke, Ozone Alert – Fireworks



## News Release

County Commission: Steve Sisolak, Chairman Chris Giunchigliani, Vice Chair Susan Brager Larry Brown James B. Gilbson Manlyn Kirkpathick James Weekly

Yolanda King, County Manage

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[DATE]

#### Smoke, Ozone Alert Issued Due to Fireworks

Clark County's Department of Air Quality (DAQ) is issuing an alert for [DATE] - [DATE], for elevated levels of smoke and ozone due to local fireworks. Air Quality officials say smoke is made of small dust particles and other pollutants that can aggravate respiratory diseases and contribute to ground-level ozone formation.



According to the U.S. Environmental Protection Agency, people who may be most sensitive to elevated levels of

particulates and ozone include individuals with respiratory problems, cardiac disease, young children or senior citizens. Consult your physician if you have a medical condition that makes you sensitive to air quality conditions.

Smoke is made of small particles and other pollutants that can aggravate respiratory diseases and contribute to ground-level ozone formation. Exposure to ozone can induce coughing, wheezing and shortness of breath even in healthy people. A seasonal ozone advisory is currently in effect.

#### SMOKE AND OZONE TIPS

- · Stay indoors when you smell or see smoke.
- Limit outdoor activity and exertion when ozone levels are elevated exercise makes you breathe
  heavier and increases the amount of particulates you may inhale.
- Keep windows and doors closed. Run your air conditioner inside your house and car. Air conditioning filters out smoke and particles.
- Change your indoor air filters if they are dirty.
- · Schedule activities for the morning or evening when ozone levels are usually lower.
- Substitute a less intense activity walk instead of jog, for example.
- Reduce driving combine errands into one trip.
- Don't idle your car engine unnecessarily.
- Use mass transit or carpool.
- Fill up your gas tank after sunset. Try not to spill gasoline when filling up, and don't top off your tank.
- · Keep your car well maintained.
- Consider landscaping that uses less water and gas-powered equipment to maintain.
- Turn off lights and electronics when not in use. Less fuel burned at power plants means cleaner air.

[more]

Clark County news releases may be found at <a href="www.ClarkCountyNV.gov">www.ClarkCountyNV.gov</a>.
You may also follow the County on more than 40 social media sites, including Facebook, Twitter, Instagram, LinkedIn, Pinterest and YouTube.

## Appendix D

### **Public Notice Documentation**

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#### **Notice of Public Comment**

### NOTICE OF PUBLIC COMMENT PERIOD FOR THE PROPOSED CLARK COUNTY MITIGATION PLAN FOR EXCEPTIONAL EVENTS

NOTICE IS HEREBY GIVEN of a public comment period on the proposed *Clark County Mitigation Plan for Exceptional Events*. This mitigation plan for exceptional events was prepared in accordance with the provisions outlined in 40 CFR 51.930(b). The U.S. Environmental Protection Agency identified two types of seasonal exceptional events that occur in Clark County: (1) PM<sub>10</sub> exceedances driven by high winds, and (2) ozone exceedances driven by wildfire smoke (81 FR 68272, "Treatment of Data Influenced by Exceptional Events," Table 6). In addition to these two types of events, Clark County has proactively addressed wildfire smoke-driven and fireworks smoke-driven PM<sub>2.5</sub> exceedance events in this mitigation plan.

NOTICE IS FURTHER GIVEN that a 30-day public comment period will begin on August 30, 2018, and end at 4:00 PM on October 1, 2018. The public may review and provide written comments on the proposed *Clark County Mitigation Plan for Exceptional Events* during this period.

Copies of the proposed plan may be reviewed at the Clark County Department of Air Quality (DAQ), 4701 W. Russell Rd., Suite 200, Las Vegas, NV 89118, or on the DAQ website at <a href="http://www.clarkcountynv.gov/airquality/Pages/default.aspx">http://www.clarkcountynv.gov/airquality/Pages/default.aspx</a>. Copies may also be obtained by contacting Rodney Langston at (702) 455-1661.

Any written comments must be submitted no later than 4:00 PM on October 1, 2018. Comments should be addressed to Rodney Langston at the mailing address given above, or sent via email to <a href="mailto:langston@clarkcountynv.gov">langston@clarkcountynv.gov</a> or via fax to (702) 383-9994.

Published: August 30, 2018

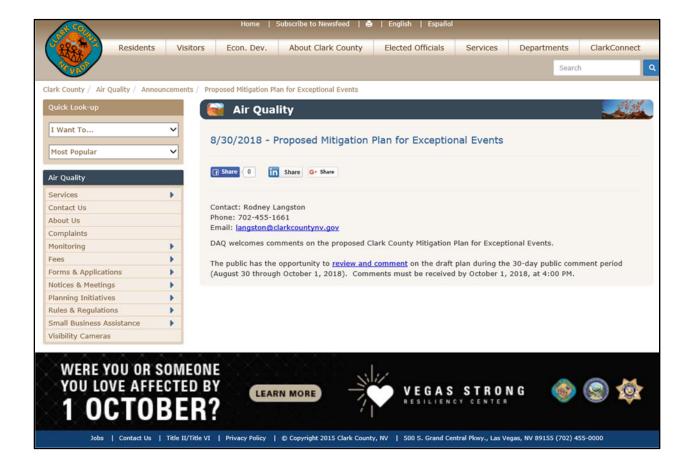
Marci D. Henson, Director

Marcio Heuson

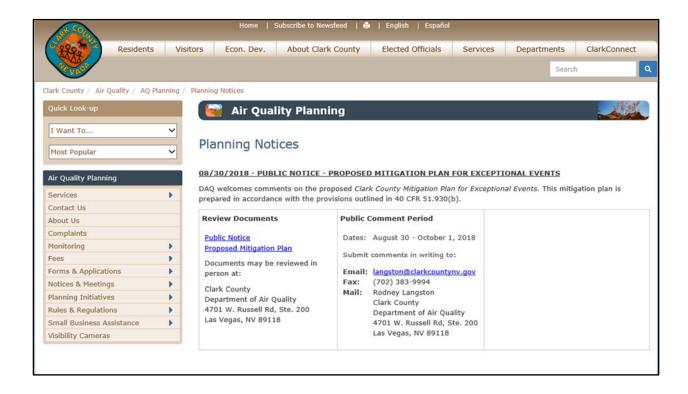
#### **DAQ Website Notice #1**



#### **DAQ Website Notice #2**



#### **DAQ Website Notice #3**



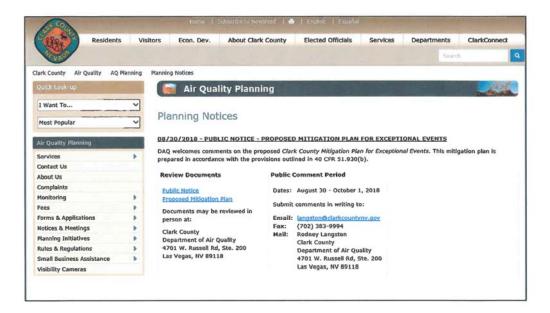
#### **Affidavit of DAQ Website Posting**

#### AFFIDAVIT OF WEBSITE POSTING OF PUBLIC NOTICE

STATE OF NEVADA ) ) ss.
COUNTY OF CLARK )

I, Araceli Pruett, being first duly sworn, depose and say that I am over 18 years of age and a Planner with the Clark County Department of Air Quality (DAQ). I certify that the *Clark County Mitigation Plan for Exceptional Events* was posted on the DAQ website from August 30, 2018, through October 1, 2018. Below is a screenshot of the posting on the DAQ website at:

http://www.clarkcountynv.gov/airquality/planning/Pages/Planning Notices.aspx



I declare under penalty of perjury under the laws of the State of Nevada that the foregoing is true and correct.

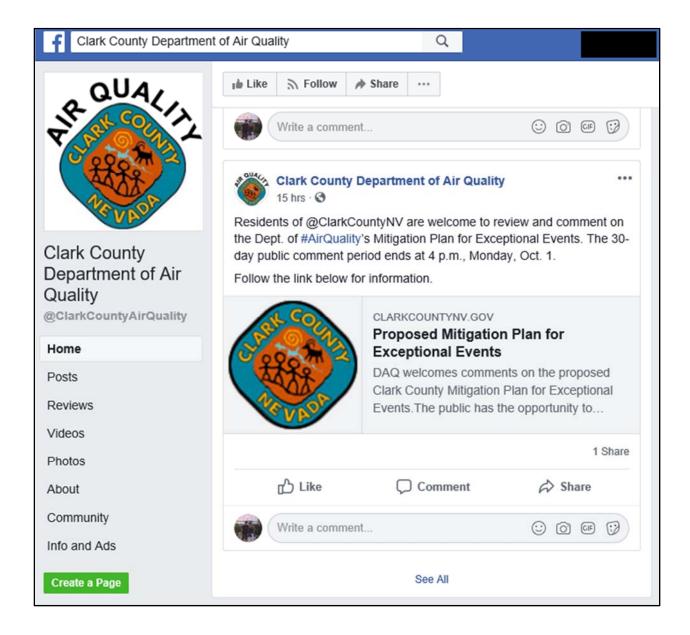
Araceli Pruett DAQ Planner

Subscribed and sworn to before me this 17 day of OCTOBLA , 2018.

NOTARY PUBLIC My Commission Expires: September 13, 2020

BRIANNA MICHELLE HOLLAND NOTARY PUBLIC State of Nevada Appt. No. 16-3901-1 My Appt. Expires September 13, 2020

#### **DAQ Facebook Posting**



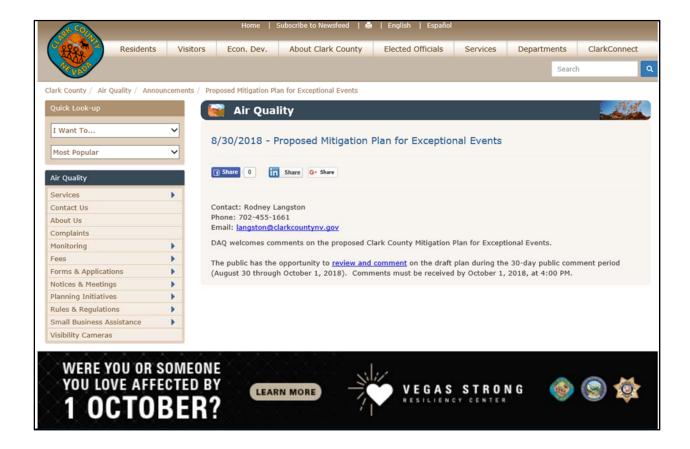
#### **DAQ Twitter Posting**



#### **Clark County Website Notice #1**



#### **Clark County Website Notice #2**



#### **E-Notice**

#### Araceli Pruett

From: Rodney Langston

Sent: Thursday, August 30, 2018 9:46 AM

To: Araceli Pruett

Subject: NOTICE OF PUBLIC COMMENT PERIOD FOR THE PROPOSED CLARK COUNTY

MITIGATION PLAN FOR EXCEPTIONAL EVENTS

NOTICE IS HEREBY GIVEN of a public comment period on the proposed Clark County Mitigation Plan for Exceptional Events. This mitigation plan for exceptional events was prepared in accordance with the provisions outlined in 40 CFR 51.930(b). The U.S. Environmental Protection Agency identified two types of seasonal exceptional events that occur in Clark County: (1) PM10 exceedances driven by high winds, and (2) ozone exceedances driven by wildfire smoke (81 FR 68272, "Treatment of Data Influenced by Exceptional Events," Table 6). In addition to these two types of events, Clark County has proactively addressed wildfire smokedriven and fireworks smoke-driven PM2.5 exceedance events in this mitigation plan.

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Published: August 30, 2018

#### **E-Notice Distribution List**

PLANNING E-NOTICE DI	
Organization	Contact
Air & Waste Management Association	Paul Fransioli
American Lung Association Nevada	James Martinez
Bureau of Land Management	Lisa Christianson
City of Boulder City	Michael Mays
City of Henderson	Sean Robertson
City of Las Vegas	Marco Velotta
City of Las Vegas	Milagros (Miles) Escuin
City of Las Vegas	Robert Summerfield
City of North Las Vegas	Alfredo Melesio
City of North Las Vegas	Johanna Murphy
Clark County	Daniel Kezar
Clark County	Mario Bermudez
Clark County School District	Chris Dingell
Clark County School District	Dimitrios Karapanagiotis
Las Vegas Valley Water District	Brian Bowler
Nellis Air Force Base	Shimi Mathew
Nevada Department of Environmental Protection	Sheryl Fontaine
Nevada Department of Environmental Protection	Sig Jaunarajs
Nevada Resort Association	Sabrina Santiago
Nevada Resort Association	Virginia Valentine
Regional Flood Control	Steve Parrish
Regional Transportation Commission	Beth Xie
Regional Transportation Commission	Craig Raborn
Sierra Club Toiyabe Chapter	Brian Beffort
Southern Nevada Health District	Nicole Bungum
Southern Nevada Off Road Enthusiasts	Ken Thatcher
Southern Nevada Water Authority	Ayoub
Southern Nevada Water Authority	Keiba Crear
Southern Nevada Water Authority	Thomas Maher
University of Nevada Las Vegas	Dave James, PhD.
Southern Nevada Home Builders	Amanda Moss
Southern Nevada Home Builders	Nat Hodgson
Washoe County Health District	Charlene Albee
Washoe County Health District	Daniel Inouye

## Appendix E

# Public Notice Comments and DAQ Responses

#### **Public Comment Report**

Public Notice: DAQ Website: August 30, 2018 through October 1, 2018

Clark County Website: August 30, 2018 through October 1, 2018

Public Comment Period: August 30, 2018 through October 1, 2018

Formal Comments Received: None

DAQ Responses: None