

Protecting the air we share

Air Quality



NATURAL EVENTS ACTION PLAN FOR HIGH-WIND EVENTS CLARK COUNTY, NEVADA

(Las Vegas Valley – Hydrographic Area 212
and the Apex Valley – Hydrographic Areas 216/217)

Clark County
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List of Acronyms

<u>Acronym</u>	<u>Definition</u>
ADT	Average Daily Trips
AIRS	Aerometric Information Retrieval System
AQI	Air Quality Index
AQRs	Air Quality Regulations (Clark County Department of Air Quality and Environmental Management)
BACM	Best Available Control Measures
BCC	Clark County Board of County Commissioners
BLM	Bureau of Land Management (U.S. Department of the Interior)
BMP	Best Management Practice
CAAA	Clean Air Act Amendments of 1990
CCCD	Clark County Conservation District
CFR	Code of Federal Regulations
CMB	Chemical Mass Balance
CAO	Corrective Action Order
DAQEM	Clark County Department of Air Quality & Environmental Management
FR	Federal Register
GIS	Geographic Information System
MAC	Medical Advisory Committee
MET	Meteorology Data (Weather, Winds, Precipitation, etc.)
mph	miles per hour
MSM	Most Stringent Measures
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NOAA	National Oceanic Atmospheric Administration - Climatic Data Center
NOV	Notice of Violation
NWS	National Weather Service
PEP	Particulate Emission Potential
PM	Particulate Matter
PM ₁₀	Particulate Matter 10 microns or less in aerodynamic diameter
PM _{2.5}	Particulate Matter 2.5 microns or less in aerodynamic diameter
PSA	Public Service Announcement
QA/QC	Quality Assurance / Quality Control
RFP	Reasonable Further Progress Report
RTC	Regional Transportation Commission of Clark County
SIP	Clark County, Las Vegas Valley, PM ₁₀ State Implementation Plan
SLAMS	State and Local Air Monitoring Station
UNLV	University of Nevada, Las Vegas
U.S. EPA	United States Environmental Protection Agency
µg/m ³	Micrograms per cubic meter

Executive Summary

The U.S. EPA in accordance with the Clean Air Act (CAA) has classified Clark County as a “serious” nonattainment area for PM₁₀, (particulate matter having an aerodynamic diameter of 10 microns or less). Ten microns is approximately one-seventh the diameter of a human hair. Violations of the National Ambient Air Quality Standards (NAAQS) for PM₁₀ are largely due to windblown dust from a variety of sources. High-wind events (sustained winds of 25 mph or greater and/or wind gusts at 40 mph or greater¹), because they can overwhelm even the most stringent control measures, present a public health concern for both residents and visitors to Clark County. This Natural Events Action Plan (NEAP), prepared in compliance with the U.S. EPA Natural Events Policy (1996), is designed to accomplish three primary objectives:

- Provide a high-wind notification system for the public and the regulated community to warn of an impending event; notify the public of an ongoing event; and to alert the public of unhealthful concentrations of PM₁₀ in the air. The notification system provides the public with useful information concerning the health effects of PM₁₀ and suggests ways the public and at risk populations can limit their exposure;
- Provide education and outreach programs to the public, businesses, and industrial communities. The programs and informational materials inform the public; businesses and industrial communities how they may reduce their exposure to elevated PM₁₀ concentrations during high-wind events; and actions they can take to help reduce PM₁₀ emissions; and
- Ensure that PM₁₀ control measures are implemented during high-wind events to reduce elevated PM₁₀ concentrations and the frequency of violations of the NAAQS.

This NEAP applies to the Las Vegas Valley (Hydrographic Area 212) and the Apex Valley (Hydrographic Areas 216 and 217). Both of these areas have experienced violations of the 24-hour NAAQS for PM₁₀. Clark County and participating stakeholders utilized the guiding principles of the U.S. EPA Natural Events Policy in the development of this NEAP. Protection of the public health is the foundation upon which this document is based. The NEAP and corresponding appendices present detailed information on the actions and programs already implemented in Clark County.

These actions and programs include the high-wind event notification system; education and outreach programs; enforcement actions designed to reduce PM₁₀ emissions during

¹ June 2001 PM₁₀ 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 PM₁₀ 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.

high-wind events; and required documentation submitted to the U.S. EPA for documentation of high-wind events that have resulted in violations of the PM₁₀ NAAQS. The appendices include detailed information on Best Available Control Measures (BACM) for PM₁₀, documentation on the public review process, public comments, and documentation of approval by the Clark County Board of Commissioners of the NEAP.

Section 1: INTRODUCTION

On May 30, 1996, the U.S. EPA issued the Natural Events Policy (NEP) in a memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation. In this memorandum, the U.S. EPA announced its new policy for protecting public health when the PM₁₀ National Ambient Air Quality Standards (NAAQS) are exceeded due to natural events. Under this policy three categories of natural events are identified as exceeding the PM₁₀ NAAQS:

- Volcanic and seismic activity;
- Wildland fires; and
- High-wind events.

Only high-wind events are addressed in this NEAP, because of the natural events defined in the NEP, only high winds have caused exceedances in Clark County. During 2002, four high-wind events occurred resulting in exceedances of the PM₁₀ NAAQS. During 2003, two high-wind events occurred resulting in exceedances of the PM₁₀ NAAQS. Lastly, two high-wind events occurred during 2004 that resulted in exceedances of the PM₁₀ NAAQS. Therefore, this NEAP is limited to addressing high-wind events.

The U.S. EPA's natural events policy defines high winds as uncontrollable natural events under the following conditions:

- The dust originated from non-*anthropogenic* (non-human-induced) sources; or
- The dust originated from *anthropogenic* (human-induced) sources controlled using best available control measures (BACM).

Conditions that create high-wind events vary from area to area and are based on soil type, precipitation, and the speed of the wind.

U.S. EPA Natural Events Policy

The U.S. EPA Natural Events Policy sets forth EPA's policy for protecting the public health in areas where violations of PM₁₀ national health standards may be due to uncontrollable natural events (e.g., high winds) (See Appendix A, for a copy of the NEP). The guiding principles used by the U.S. EPA in the development of this policy are:

- Protection of public health is the highest priority of Federal, State, and local air pollution control agencies;
- The public must be informed whenever the air quality in the area is unhealthy;
- All valid ambient air quality data should be submitted to the U.S. EPA;
- State and local agencies must take appropriate reasonable measures to safeguard the public health regardless of the source of PM₁₀ emissions; and

- Emission controls should be applied to sources that contribute to exceedances of the PM₁₀ NAAQS when those controls will result in fewer exceedances of the standards.

In order for exceedances of the NAAQS to be considered as a high-wind event, a Natural Events Action Plan must be developed to address future events. The following is a summary of the specific U.S. EPA guidance regarding the development of a NEAP.

1. Analysis and documentation of the event should show a clear causal relationship between the measured exceedance and the natural event. The type and amount of documentation provided should be sufficient to demonstrate that the natural event occurred, and that it impacted a particular monitoring site(s) in such a way to cause the PM₁₀ concentrations measured.

A public education program shall be established. Such programs may be designed to educate the public about the short-term and long-term harmful effects that high concentrations of PM₁₀ could have on their health and inform them that:

- a. Certain types of natural events affect the air quality of the area periodically,
 - b. A high-wind event is imminent, and
 - c. Specific actions are being taken to minimize the health impacts of events.
2. A public notification and health advisory program to minimize public exposure to high concentrations of PM₁₀ shall be in place. Programs to minimize public exposure should:
 - a. Identify the people most at risk;
 - b. Notify the at-risk population that a high-wind event is imminent and/or currently taking place;
 - c. Suggests actions to be taken by the public to minimize their exposure to high concentrations of PM₁₀; and
 - d. Suggests precautions to take if exposure cannot be avoided.
 3. The agency implementing the plan shall abate or minimize appropriate contributing controllable sources of PM₁₀. Programs to minimize PM₁₀ emissions from high winds may include the application of BACM to any sources of soil disturbed by anthropogenic activities. The BACM application criteria require analysis of the technological and economic feasibility of individual control measures on a case-by-case basis. The NEAP should include analysis of BACM for contributing sources. If BACM are not defined for the anthropogenic sources in question, then the next step listed below is required.
 4. The agency implementing the plan must identify, study, and implement practical mitigating measures as necessary. The NEAP may include commitments to conduct pilot tests of new emission reduction techniques. For example, it may be

desirable to test the feasibility and effectiveness of new strategies for minimizing sources of windblown dust through pilot programs. The plan must include a timely schedule for conducting such studies and implementing measures that are technologically and economically feasible.

5. The agency should reevaluate the NEAP for an area every 5 years at a minimum and make appropriate changes to the plan. The periodic reevaluation shall include:
 - a. The conditions causing violations of a PM₁₀ NAAQS in the area;
 - b. The status of implementation of the NEAP; and
 - c. The adequacy of the actions being implemented.
6. The NEAP should be developed by the agency in conjunction with the stakeholders affected by the plan.
7. The NEAP should be made available for public review and comment and may, but are not required, to be adopted as a revision to the State Implementation Plan (PM₁₀ SIP) if current SIP rules are not revised.
8. The NEAP should be submitted to the U.S. EPA for review and comment.

The following sections and text describe the Clark County NEAP and its conformance with the above-described U.S. EPA guidance for natural events.

Purposes and Objectives of the NEAP

The purpose of the NEAP is to ensure that the citizens of Clark County are informed about the health hazards associated with wind blown PM₁₀; advised of activities that are known to result in increased windblown PM₁₀ levels; advised of methods to avoid exposure to elevated levels of PM₁₀; assure that exceedances of the NAAQS are not resulting from anthropogenic activity and that disturbed soil surfaces remain stable. It is DAQEM's primary objective to minimize the public's exposure to elevated levels of PM₁₀ when elevated levels cannot be humanly prevented.

The advisory and education program is the major element of the NEAP that enables DAQEM to justify an exceedance, which overwhelmed BACM. The program notifies stationary sources of the potential, or the occurrence of a high-wind event. As required by Clark County Air Quality Regulations (AQRs), the stationary sources can cease/reduce any activity that raises dust levels during high-wind events.

Scope of the Natural Events Action Plan (NEAP)

Clark County and participating stakeholders utilized the guiding principles of the U.S. EPA Natural Events policy in the development of the NEAP. Protection of the public health is the highest priority and the foundation of this document.

This NEAP contains detailed information about the actions implemented in Clark County to minimize public exposure to potentially high levels of PM₁₀ caused by winds. The primary components of the NEAP are:

- The high-wind event notification system;
- Education and outreach programs;
- Enforcement program to reduce emissions; and
- The required documentation and justification system of high-wind events to be provided to the U.S. EPA.

Area of Applicability of this NEAP

This NEAP is applicable to the Las Vegas Valley and to the Apex Valley. The Las Vegas Valley is one of the fastest growing metropolitan areas in the nation. The population expanded from about 400,000 in 1980 to 1.4 million in 2000 (U.S. Census Bureau, Census 2000). The cities of Las Vegas, North Las Vegas and Henderson are located in the Las Vegas Valley within Clark County, in the southern tip of Nevada. Situated in the Las Vegas Valley, the Las Vegas metropolitan area serves as one of the fastest growing cities, and busiest entertainment centers for the United States.

The Apex Valley area is located to the northeast of the Las Vegas Valley and is comprised of Hydrographic Areas 216 and 217. No residences are located in the Apex Valley, but a number of people are employed at the industrial facilities located in the valley. A regional landfill, power plants, mining operations, and mineral processing facilities are located in the southern part of the Apex Valley. All stationary sources within the Apex Valley have installed Best Available Control Technology for PM₁₀.

Emphasis is placed on dust control and the requirements of the AQRs due to possible influences from the Las Vegas Valley through regional transport. Wind flow patterns into the Apex Valley and the predominant wind flow patterns of the Apex Valley make dust control extremely important. The main purpose of this dust control is to protect the health of the workers within that area and to ensure that the Apex Valley does not contribute to regional haze transport to the Grand Canyon. The Grand Canyon is only 100 kilometers (62.14 miles) from that area. The other areas in Clark County that could be influenced by the Las Vegas Valley and Apex Valley transport issues are the cities of Logandale, Mesquite, Overton, Moapa, and outlying areas near these cities.

For further information about the geography, climatology and land uses in these two areas, see Appendix B. The following map (Figure 1) shows the locations of the two areas that are specifically covered by this NEAP.

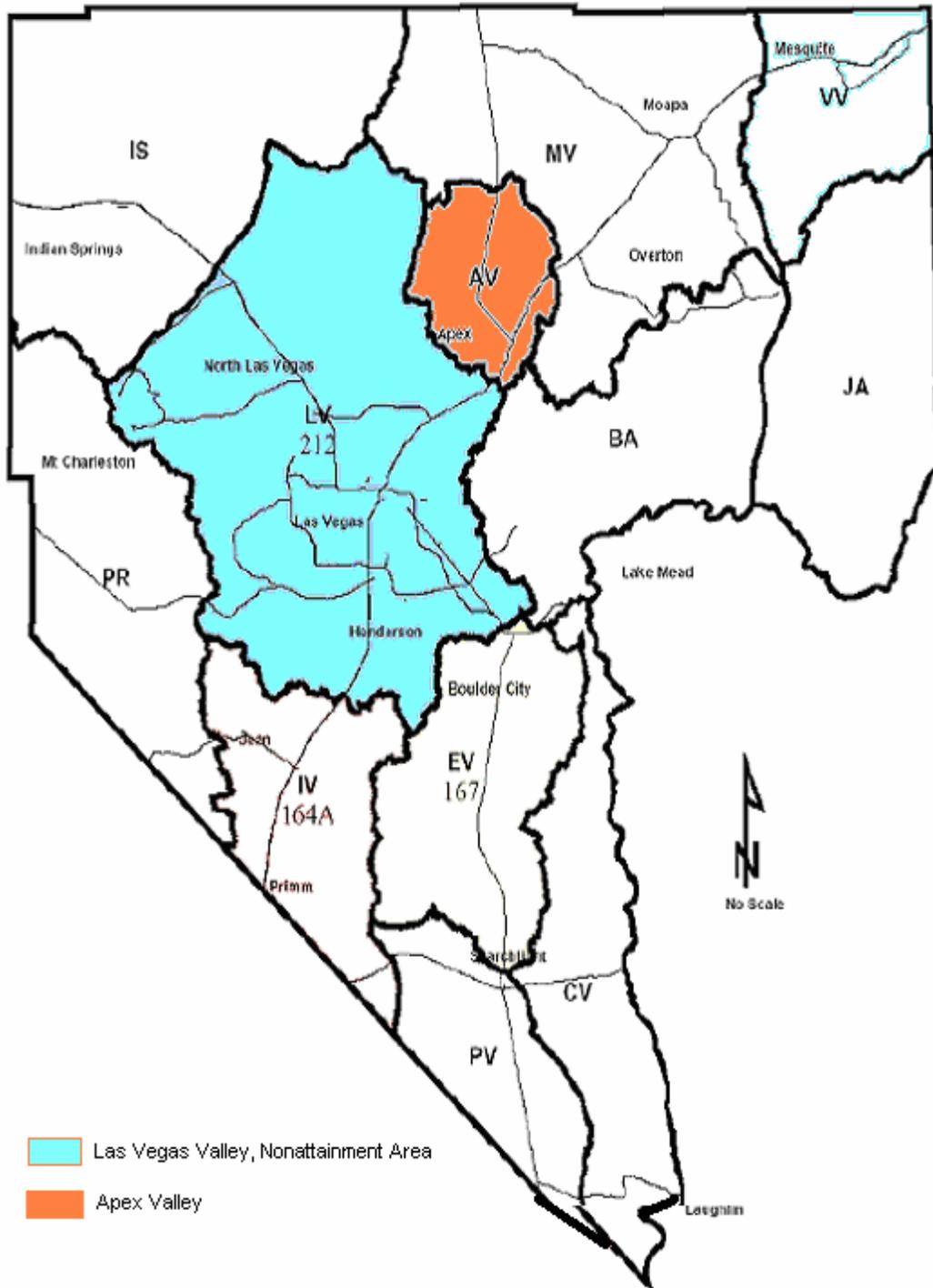


Figure 1 – Clark County NEAP (LV Valley & Apex Valley) Coverage Area

Section 2: PUBLIC EDUCATION AND OUTREACH PROGRAM

Public education and outreach is essential for Clark County citizens to understand what the Natural Events Action Plan (NEAP) means to them, and actions they can take to reduce exposure. The purpose of public outreach program is to inform and educate the public about high-wind events, the associated high PM₁₀ levels, and the presence of potential health effects. The elements of the program include:

- Informing the public when air quality in the area is unhealthy;
- Explaining what the public can expect when high-wind events occur;
- Actions the public can take to minimize their exposure; and
- Informing the public of the steps taken to control dust emissions during high wind conditions.

Particulate matter consists of complex mixture of particles suspended in the air we breathe. Particles are present everywhere, but high concentrations present a serious danger to human health. Of greatest concern to public health, are the particles small enough to be inhaled into the deepest parts of the lung. These small coarse particles are known as PM₁₀ (particulate matter, less than 10 microns in aerodynamic diameter), and the even smaller particles (fine particles) are known as PM_{2.5} (particulate matter, less than 2.5 microns in aerodynamic diameter). For comparison, a human hair is about 75 microns in diameter. These particles can accumulate in the respiratory system and are associated with numerous health effects. Exposure to coarse particles is primarily associated with the aggravation of respiratory conditions. Fine particles are associated with health effects such as heart and lung disease; increased respiratory symptoms and disease; decreased lung function; and even premature death.

Studies have indicated that the elderly, children and individuals with existing respiratory diseases are at risk of more serious symptoms, including coughing, phlegm, wheezing, shortness of breath, bronchitis, increased asthma attacks, and aggravation of lung or heart disease. Although these sensitive populations are more susceptible to health impacts, it is recommended that everyone take precautions to avoid exposure to poor air quality conditions.

Actions that can be taken to reduce exposure to high concentrations of PM₁₀ are listed below. These actions are included in the public outreach materials developed as a part of the NEAP.

For the general public the following actions are recommended.

- If PM₁₀ levels are high outdoors, keep windows and doors closed. If needed for comfort, use air conditioners or heating systems on recycle/recirculation mode.
- During extreme dust episodes, limit your time spent outdoors.
- If symptoms of heart or lung disease occur, (including shortness of breath, chest tightness, chest pain, palpitations or unusual fatigue) contact your health care provider.

- Individuals with heart or lung disease should follow their health management plan from their health care provider. Asthmatic individuals should follow a prescribed asthma management plan.
- Individuals should avoid strenuous exercise outdoors during time periods when PM₁₀ levels are elevated.

Businesses and the industrial communities are advised to contact an Industrial Hygienist to evaluate their specific needs. In addition, the Medical Advisory Committee (MAC) can assist in providing information to risk management staff concerning health effects and health precautions during high-wind and dust events.

Public Outreach and Education

To minimize public exposure to air pollution, the Clark County Department of Air Quality & Environmental Management developed and implemented an education program to protect the public from the adverse health problems associated with elevated levels of PM₁₀. The first goal is to educate the public about the harmful effects of high concentrations of PM₁₀ and actions they can take to reduce their exposure. The second goal is to inform the public when:

- Certain types of natural events may affect the air quality in the area;
- A high-wind event is imminent; and
- Specific actions need to be taken to minimize the health impacts of high-wind events.

To meet these goals, the Department of Air Quality & Environmental Management (DAQEM) implemented a comprehensive program including scheduled local outreach events to provide information to the public specifically during the high-wind season, February through August. The public notifications and education programs include but are not limited to the items listed below.

- **Community Outreach**

As of March 2003, air quality alerts are being issued by DAQEM during the high wind season (see Appendix C for details). Other activities include: 1) expanding the public education effort to include air quality reporting training for local weather news media; and 2) meetings with city, county, and local environmental and health professionals to devise improved ways to educate/reach the community regarding blowing dust and its impacts.

Media press releases for print, local radio and television will be issued in the community as needed. Activities include: 1) newspaper articles highlighting the significant impacts of blowing dust in the Las Vegas Valley (e.g. "Residents Warned of Dangers of Dust," Las Vegas Sun, March 19, 2003. This referenced article also highlighted actions to reduce dust related impacts, and; 2) press releases on the NEAP development and control strategies. Additional newspaper articles and press releases are located in Appendix C.

DAQEM provides particulate matter and NEAP information to the public by providing a Speakers Bureau, web-site information and Public Service Announcements. DAQEM will also continue to build partnerships with local businesses.

- *School and Youth Outreach*

DAQEM established a school and youth outreach program during 2004 that includes classroom and youth group presentations; teacher trainings; and air quality informational packets. The informational packets include a section on high-wind events and steps to be taken to avoid exposure to fugitive dust.

- *Annual Community Events*

DAQEM actively participates in community events (e.g. Clark County Fair, Henderson Parade, and Clark County Health and Wellness Fair) to raise public awareness of the ongoing efforts to reduce blowing dust and its impacts. At these events, DAQEM sets up a booth display that includes the NEAP brochure and the booth is staffed by air quality professionals to answer any questions the public may have.

- *Industrial Education and Outreach*

DAQEM provides dust classes to local contractors and other PM₁₀ major sources to familiarize these organizations with DAQEM air quality regulations, the most effective way to reduce PM₁₀ emissions, and air pollution health effects. Upon completion of the course, each participant is issued a dust card and Certificate of Completion.

Public Education Efforts Accomplished to Date

Actions taken to date to develop the education program include:

- An informational and health-related brochure has been and will continue to be distributed by DAQEM to sensitive populations as well as to the general public. Distribution of “*Dust Storms and Your Health: What Everyone Should Know*” brochure began in April 2003. It has been used as an educational handout at DAQEM’s public outreach and community events. The brochure is available in both English and Spanish versions;
- Distribution of the “*Protecting the Air We Share*” brochure began in March 2003. This brochure provides information on the six criteria pollutants, defines particulate matter, and discusses air quality tips. It has been used as an educational handout at the DAQEM’s public outreach and community events;
- An informational and health-related postcard “*Dust Storms and Your Health: What Everyone Should Know*” is used as a mass mailer. The postcard reminds the public of the health effects of high levels of particulate matter, and provides

recommended actions that can be taken to reduce exposure to PM and to reduce air pollution. Mass mailing of these postcards take place in the early spring months to residents and business located in the North and West areas of Clark County. Summer mailers target the Southern and East area residents of Clark County. This postcard mailer is available in both English and Spanish versions;

- DAQEM developed a NEAP Briefing Document entitled “*Particulate Matter Air Pollution from Natural Events*” (See Appendix C). This document outlines PM₁₀ problems in Clark County, and is available in both English and Spanish versions. It discusses why PM₁₀ is a public health issue and defines the NEAP. It is used as an educational handout at stakeholder meetings and presentations. It was added to the Department’s web site under the section concerning the NEAP;
- DAQEM issues High-Wind Air Pollution Notifications in conjunction with the Las Vegas station of the National Weather Service (NWS). These notices are issued when forecasted wind events will reach sustained winds of 25 miles per hour or more and/or frequent gusts of 40 miles per hour or more, twelve to twenty-four hours prior to the event. The notifications are issued in two stages: Advisory and Alert. These stages will begin according to the increasing levels of the severity of the dust (Section 3: Public Notification and Air Quality Advisory Program explains the process in detail); and
- Clark County applied for and received a \$200,000 public outreach grant from the State of Nevada. These funds will be used in large part for a public campaign in the Las Vegas and Apex Valleys. The focus of the campaign will be on everyday choices that people can make for a positive air quality impact (i.e. not disturbing the desert) and on ways to avoid exposure to particulate matter during wind events.
- Presentations about the Clark County NEAP were given in the following settings:
 - Working group meetings;
 - A public workshop; and
 - A County Commissioner Board Meeting.

These presentations included information answering these questions: Why PM₁₀ is a health concern?; Who is most at risk?; What options are available when the PM₁₀ standards are violated?; What dust emission controls are available?; and How the public can help in the NEAP development process. The presentations were tailored for each audience, as appropriate, an example is provided in Appendix C.

Section 3: PUBLIC NOTIFICATION AND AIR QUALITY ADVISORY PROGRAM

The Natural Events Policy (NEP) states that advisories should inform the public that a dust event is imminent, currently taking place, or has reached hazardous levels (PM₁₀ concentrations have exceeded the National Ambient Air Quality Standards). The Department of Air Quality & Environmental Management (DAQEM) has developed a program that places equal value on educating the public, forecasting air quality pollution events, and air quality notifications as the best approach to meet the goal of minimizing exposure from high concentrations of PM₁₀.

The Air Quality Notification Program was designed to heighten awareness of health hazards caused by high dust levels, informing susceptible populations, and their caregivers about precautions they should take when PM₁₀ levels are high. The Air Quality Notification Program consists of the following elements:

- Episodes of unhealthful PM₁₀ levels are likely to occur in Clark County during late winter and early spring;
- Individuals should take precautionary measures when they observe a dust storm in progress;
- Notifying the general public to minimize exposure to high PM₁₀ levels, including precautionary measures, such as staying indoors with windows closed and avoiding outdoor exercise, and activities during a dust storm; and
- Individuals who wish to become more acquainted with unhealthful levels of PM₁₀ may consult the DAQEM monitoring website at www.ccairquality.org to review current near-real time data and Air Quality Index (AQI) values for PM₁₀ concentrations, or the County web page at www.accessclarkcounty.com for PM₁₀ information.

The Medical Advisory Committee (MAC)

The Medical Advisory Committee (MAC) comprised of physicians from the Clark County medical community works closely with the Department of Air Quality and Environmental Management (DAQEM) and the Clark County Health District (CCHD) to provide health-related information to the public before, during, and after high-wind events.

The MAC membership may change from time to time; however, MAC membership includes physicians from the fields of pediatrics, pulmonology, family and general medicine, geriatrics, and industrial health. Members of the MAC review and provide input on publications from the DAQEM and CCHD that contain health-related information. MAC members provide medical advice to the DAQEM during high-wind events; provide responses to media inquiries, and presentations to community groups.

When a high-wind event is predicted, the DAQEM and/or County Public Information Office (PIO) alert the MAC. Notifications request the availability of MAC members to

respond to inquiries from the public, media, and any other appropriate inquiry. The MAC serves in an advisory role and will not provide specific diagnosis or advice to individuals.

The MAC will provide public health information for the use of Clark County residents and public and governmental entities.

For detailed information about the MAC, please see Appendix C.

The Public Notification Process

The public notification program employs various actions depending on the concentration of PM₁₀. These actions are intended to mitigate adverse health effects. Each High-Wind Air Quality Notification contains the following elements:

- Forecasted weather information;
- The start and the expected expiration date and time of the high-wind event (DAQEM will terminate the notification when the concentration of pollutants falls below, and is expected to remain below the PM₁₀ standard);
- A description of health effects associated with high concentrations of PM₁₀;
- Recommendations for actions for sensitive and healthy populations to take to avoid exposure to PM₁₀;
- An encouragement to residents to call DAQEM's dust complaint hotline to report excessive amounts of blowing dust;
- An encouragement to residents to visit DAQEM's web site to view near "real-time" monitoring data; and
- Construction site operators and Stationary Sources are directed via Fax and email to inspect their sites and employ the Best Available Control Measures (BACM) to stabilize all disturbed soils on their site to reduce blowing dust.

A forecast of sustained winds of 25 miles per hour or more and/or frequent wind gusts of at least 40 miles per hour or more from the Las Vegas Office of the National Weather Service (NWS), initiates the process to evaluate whether or not to issue a High-Wind Air Quality Notification by DAQEM staff, twelve to twenty-four hours prior to the event. Based on reported weather conditions and monitoring data, Clark County issues notices in two stages: Advisory and Alert. The definitions of the stages are:

- **ADVISORY** – The Las Vegas Office of the National Weather Service (NWS) confirms forecasted wind events of sustained winds of 25 miles per hour or more and or frequent wind gusts of 40 miles per hour or more.
- **ALERT** – Meteorological and ambient monitoring data confirm that the high wind event is happening and PM₁₀ levels are elevated.

DAQEM issues notifications with forecasting assistance provided by the Las Vegas Office of the National Weather Service. The forecasting methodology, the public

education brochure, a chart summarizing the public notification responsibilities, and a copy of the forecast and air pollution notice are provided in Appendix C of the NEAP document.

DAQEM uses the following methods to minimize public exposure to PM₁₀ in Clark County:

- Identify the people most at risk to exposure of high concentrations of PM₁₀;
- Suggest actions to be taken by the public and industry to minimize their exposure and reduce outdoor activity;
- Suggest precautions to take if the exposure cannot be avoided. If outdoor activity cannot be avoided, reduce the level of exertion and duration of exposure; and
- Notify at-risk populations that a high-wind event is imminent or currently taking place.

DAQEM developed a notification system to contact at-risk populations, including:

- Clark County School District;
- Clark County Health District;
- Clark County Parks and Recreation;
- Local Municipalities (cities of Henderson, Las Vegas, North Las Vegas, and Boulder City); and
- Local media (radio and television stations).

Section 4: BEST AVAILABLE CONTROL MEASURES (BACM) FOR REDUCING WINDBLOWN DUST FROM MANMADE SOURCES AND COMPLIANCE ACTIVITY IN CLARK COUNTY

Best Available Control Measure (BAQM) Discussion

Sources of Windblown Dust in the Las Vegas and Apex Valleys

Windblown dust in the NEAP planning area occurs both from natural and man-made sources. While dust is common in undisturbed areas throughout the west, it becomes much more prevalent where natural soils have been disturbed by human activities. This is because natural soils have a tendency to form a mineral and organic crust (Desert Pavement) that is resistant to erosion by wind. Human activities can remove or break this crust, allowing dust to become airborne. Even sparse desert vegetation acts somewhat like a windbreak providing some protection to the soil surface. When human activities remove vegetation, the soil is susceptible to erosion, and as a result, airborne dust is produced. While we can do little to decrease windblown dust from the open desert during periods of high wind, there are varieties of things that can be done to decrease dust caused by human activities. Airborne dust from human activity tends to be concentrated close to populated areas because that is where the most disturbed native areas are located. The majority of the dust inhaled by the community members is generated locally rather than from the surrounding desert.

When the NEAP planning area experiences high concentrations of dust during high winds, most of the dust in the air comes from exposed areas of loose soil. Several sources of PM₁₀ are commonly encountered in urban and rural areas in the western United States and Clark County. The following is a list of major sources, but not necessarily in the order of significance:

- Disturbed vacant land areas during high winds;
- Soil disturbance during construction activities;
- Disturbed areas at construction sites during high winds;
- Unpaved roads;
- Unpaved parking lots;
- Material handling and storage yards;
- Vehicle equipment storage yards;
- Trackout of mud and dirt onto paved roads;
- Unpaved shoulders of paved roads; and
- Undisturbed desert areas overwhelmed by high winds.

Certain other “point” sources such as sand and gravel operations and asphalt concrete manufacturing may contribute relatively small amounts of airborne dust in the NEAP planning area.

Under the federal Clean Air Act, the primary responsibility for air pollution control lies with state and local governments. One of the actions required to protect public health is application of Best Available Control Measures (BACM). BACM for dust control are designed to reduce windblown dust from human activities. The PM₁₀ State Implementation Plan (SIP) for the Las Vegas Valley, submitted to the U.S. EPA in 2001, identified BACM for a variety of human activities that generate dust. A full description of what constitutes BACM is addressed in the PM₁₀ SIP and Clark County’s Air Quality Regulations (AQRs). Clark County’s AQRs are presented in Appendix D of this document.

BACM Definition

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. BACM is defined as the “*Maximum Degree of Emission Reduction Feasible for a Significant Source Category*” (59 FR 42010, August 16, 1994). BACM is determined on a case-by-case basis, taking into account technical feasibility; energy, environmental, and economic impacts; and other costs. The process of determining BACM takes into account what the most common sources of manmade dust within a community are, when they occur, what measures can be used to reduce dust, and the relative cost of such measures to their effectiveness in controlling dust.

Most BACM are physical methods of controlling dust from developed or undeveloped areas within communities. Many methods attempt to return native soils to a more protected state by replacing natural crusts with artificial covers. However, they also include controlling and/or reducing airborne dust by practices that minimize the area of disturbed soil. In addition, the length of time the soil remains exposed to hazards of wind and the timing of the disturbance have a bearing on the need for a particular BACM. Considering all these factors, it is possible to develop best management practices for specific land uses.

Selecting and Implementing BACM

Part of the BACM requirement set forth in the PM₁₀ State Implementation Plan (SIP) is the need to control a variety of sources of windblown dust. It is not the intent of the NEAP to develop or apply new types of BACM. This NEAP discusses adopted BACM and their implementation during high-wind events. This section of the plan describes the most common sources of anthropogenic dust within communities and the BACM that is employed to reduce and minimize dust during windy conditions. Clark County BACM are applicable to regulated sources seven days a week, 24-hours a day. Some of the physical measures required as part of BACM are set forth below.

Chemical Dust Suppressants and Soil Stabilizers

Chemical dust suppressants and soil stabilizers can be useful in reducing the tendency of fine-grained and loose soils to produce large amounts of windblown dust. They bind fine soil particles into larger particles that are less easily blown into the air; they retain moisture so that soils become more coherent; and they can form crusts that mimic and exceed the wind resistance of natural soil crusts.

Water has long been used for the control of dust in arid regions. For construction activities during active soil disturbance, water is the primary means of dust control. Under current drought conditions, water is an increasingly scarce and precious commodity. However, water required for dust control is only a portion of the water required for construction activities. Water use restrictions imposed by the 2002 Southern Nevada Water Authority (SNWA) *Drought Plan* and the Las Vegas Valley Water District Service Rules (August 2003) do not apply to construction activities and dust suppression (Section 12 Conservation and Drought, Subsection 12.2 Drought Conditions and 14.4 Water Waste Prohibited Section B. Exemptions – Public Health and Welfare – any activity where the use of water is the most appropriate and practical method to abate a health and safety hazard...Las Vegas Valley Water District Service Rules 8-03). Common sense approaches will be employed as part of the NEAP process to inform and educate the public, the construction industry, and other water users in the community on the smart use of water resources.

Water-soluble surfactants may be added to water to decrease the amount of water needed for dust control by reducing the initial resistance of dry soils to absorbing water. Surfactants are relatively inexpensive.

Chemical dust suppressants are often added to water, which acts to disperse the chemicals, after which the water evaporates. The chemicals coat the particle surfaces and bind the soil particles together to form a durable crust. Most products are designed for moderately traveled unpaved roads; and may also be used to stabilize shoulders of paved roads, disturbed vacant lands, and temporarily stabilize construction sites.

When used to stabilize heavily trafficked areas, these products typically require ground preparation prior to application, as well as reapplication one to four times a year to remain effective. The crusting or binding of soil particles does not need to be nearly as strong for areas that will not be trafficked by vehicles, because the binding needs only to withstand the force of the wind. Therefore, stabilization of untrafficked areas requires much less of the chemical, less ground preparation, and less frequent reapplication.

For greatest effectiveness and lowest cost, it's important to follow the manufacturer's instructions for mixing and applying these chemicals, which will likely depend on the intended use of the area. Some of these chemicals tend to suppress plant establishment and growth, and some may affect water quality if treated soils are allowed to wash into drainages.

Examples of BACM for specific land uses

Airborne dust is generated through a variety of activities that constitute the daily operations of businesses. The following list shows alternative measures for dust control for specific land uses. This list of BACM is by no means all-inclusive, and represents only some of the options available to the community. For the most comprehensive list of BACM, refer to the SIP and AQRs – Section 90 Series regulations.

BACM for Paved Roads

While paving roads is an excellent way to reduce dust, 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 of the methods to control this dust source include:

- Road shoulder stabilization by paving, covering with gravel, or using chemical dust suppressants applied in amounts and rates recommended by the manufacturer and maintained as recommended by the manufacturer;
- Reduction of dirt tracked from unpaved side roads, industrial sites and construction sites, using paved or gravel entry aprons and/or devices such as steel grates/wheel shakers, that are capable of knocking mud and bulk dirt off vehicle tires;
- Use of PM₁₀ efficient sweepers to clean paved roads;
- Use of vacuum crack seal equipment;
- Prevention of deposition of material onto paved roads by requiring truck covers, and a maximum of freeboard between the top of the truck bed and the material being transported;
- Prevention of the deposition of material onto roads by providing adequate storm water drainage;
- Cleanup of material spills and erosion-caused deposits; and
- Routine sweeping and cleaning of paved roads.

BACM for Unpaved Roads

Depending on the soil properties, heavily used unpaved roads can develop a loose, powdery surface that generates significant amounts of windblown dust even during periods of moderate wind speed. Methods to control dust from unpaved roads include:

- Prohibition of new unpaved roads in public thoroughfares;
- Traffic reduction and speed control for unpaved roads;
- Road stabilization for unpaved roads and alleys using chemical dust suppressants applied and maintained in amounts and rates recommended by the manufacturer;
- Prioritization of the paving of unpaved roads based on the criteria that includes the amount of traffic, production of dust, and vicinity of people, schools, etc. {Roads with 150 Average Daily Trips (ADT), will have the priority for paving}; and

- Adequate storm water drainage to reduce soil from unpaved roads from being washed or tracked onto paved roads.

Soil Particulate Emission Potential (PEP)

The suitability of control measures available to adequately stabilize disturbed vacant land and construction areas highly depends on the types of soil the control measure will be applied to. For construction site operators and compliance officers to make decisions with respect to control measures to be applied prior to wind events or during wind events it is imperative that it is understood what types of soils they are dealing with and what characteristics the soil has. The following paragraphs and figures give a general description and guide to the Clark County soils, to allow for informed decisions to be made by construction site operators and compliance officers.

Soil types are classified into five categories (high, moderately high, moderately low, low, and slight) based on their particulate emission potential (PEP) during active soil disturbing activities such as grading and trenching. The fifth category, “slight”, is created solely to identify areas of bedrock outcrops. PEP is determined by soil silt content (measured by the soil percentage that will pass through a 200-mesh sieve) and optimum moisture content (measured by the percent of moisture necessary to compact soils).

A graph, which plots measured optimum moisture content vs. silt content for Las Vegas Valley soils, is used to classify PEP and is included in Figure 2. If the optimum moisture content or silt content is not known for a specific project location, reference maps of Clark County and the Las Vegas Valley, delineating the five soil type categories are provided in Figures 3 and 4, respectively. Soil type category maps are to be used as a guideline. The actual measured silt content and moisture content for maximum compaction shall take precedence over any mapped soil type categories.

Additional information may be found in the Construction Activities Dust Control Handbook in Appendix D of this NEAP. For projects of 50 acres or larger, applicants for construction activity dust control permits are required to provide site specific soils tests as part of the permit application. The PEP is used to determine which Best Management Practice (BMP) is applicable for each construction activity conducted at the site.

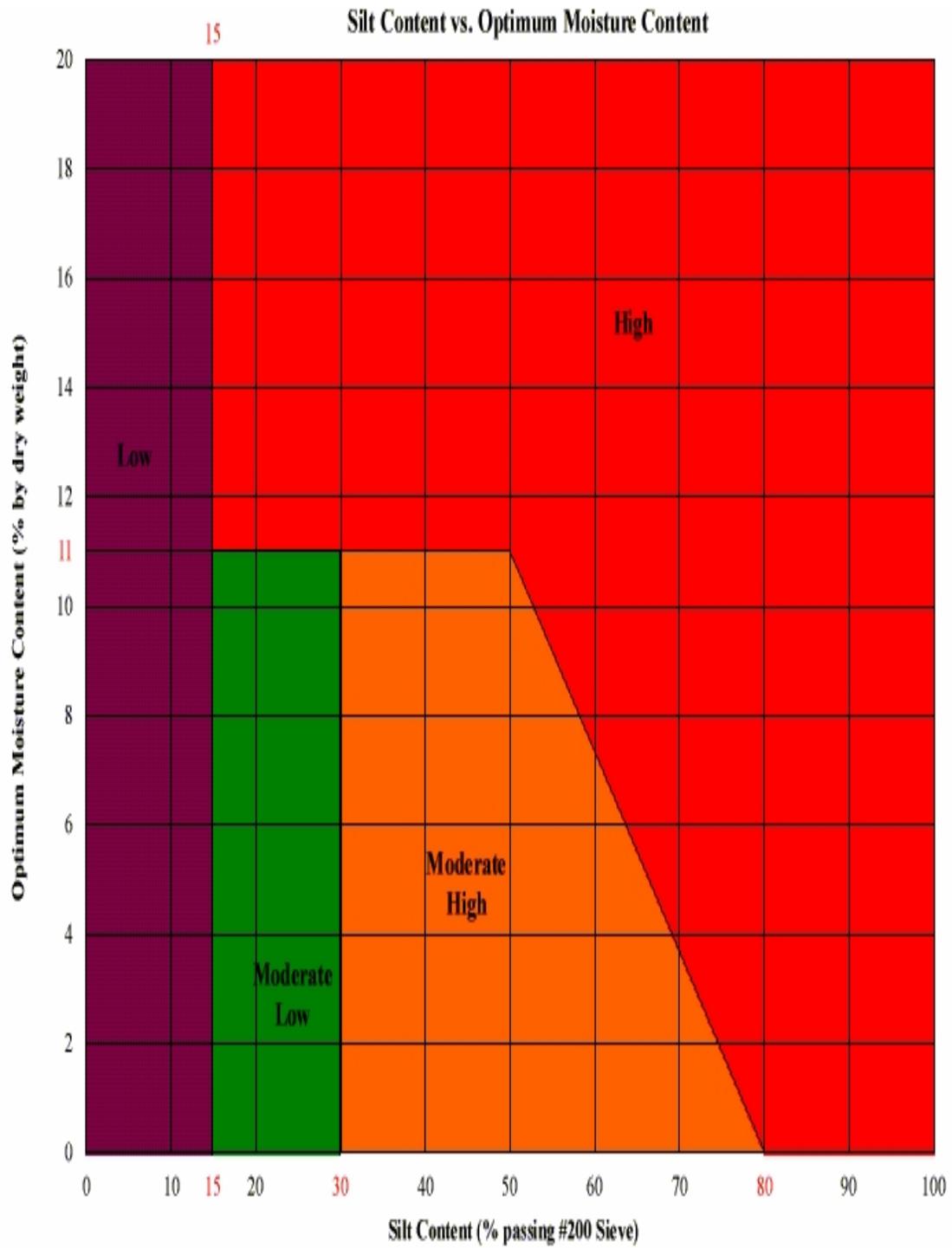


Figure 2: Silt Content vs. Optimum Moisture Content Graph

CLARK COUNTY, NEVADA

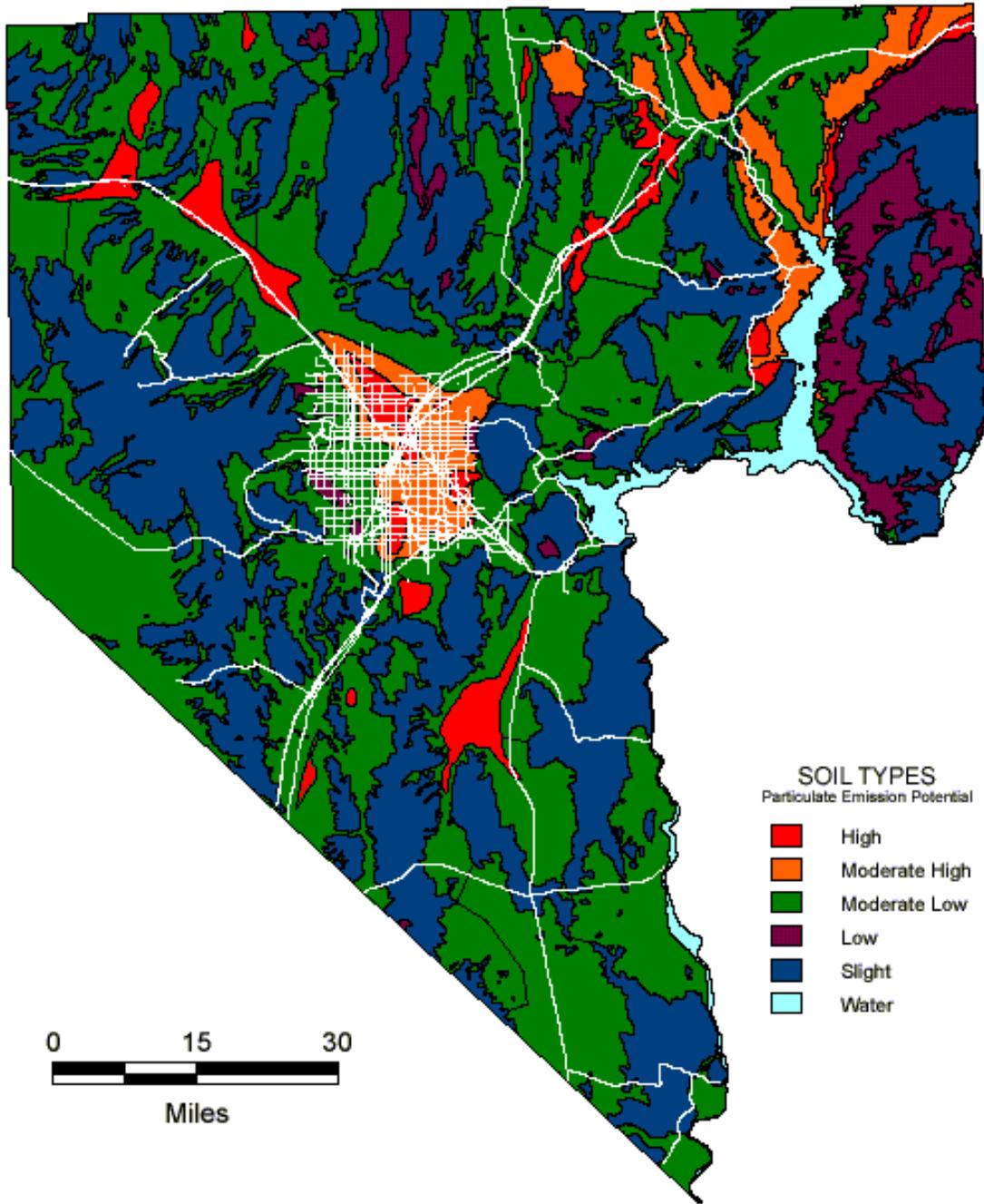


Figure 3: County Soil Types Map

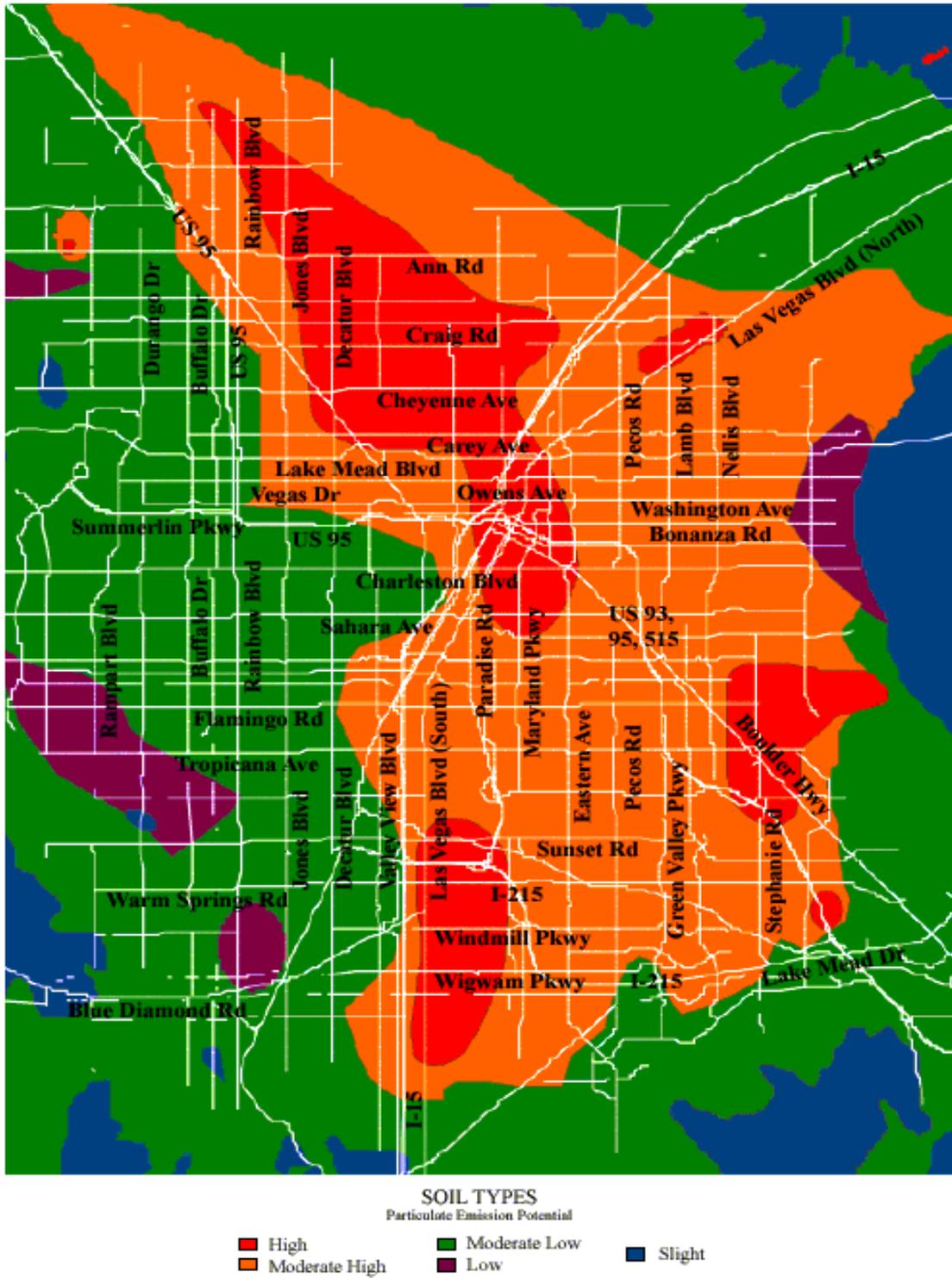


Figure 4: Valley Soils Type Map – Las Vegas Valley

BACM for Construction Activities

Construction sites, both active and inactive, can be sources for significant amounts of windblown dust. This is due to the presence of large areas of bladed ground, stockpiles, trucks hauling bulk materials, and heavy equipment traffic. Best Management Practices (BMPs) for construction sites include:

- Strengthen requirements of existing fugitive dust control rules;
- Provide for better enforcement of fugitive dust control rules;
- Mitigation bond requirement to insure implementation of dust control plan;
- Dust control plans for construction/land clearing and demolition;
- Dust control monitor required for construction sites having more than 50 acres of actively disturbed area;
- Track out control;
- Stabilization of staging areas, equipment storage, and material storage areas;
- Use of surfactants or tackifiers;
- High-wind operating restrictions;
- Phasing land development;
- Stabilized disturbed inactive surfaces;
- Dust controls for blasting of soil and rock;
- Dust controls for abrasive blasting;
- Dust controls for crushing;
- Dust controls for landscaping;
- Dust controls for paving/sub grade preparation;
- Dust controls for screening;
- Dust controls for construction traffic;
- Dust controls for trenching;
- Dust controls for truck loading;
- Dust controls for stockpiles;
- Require visible emission limits not to exceed 20 percent opacity;
- Limit visible emissions to 100 feet;
- Prevent visible emissions from crossing property line;
- Prevent tracking of dirt from construction sites by installing curbs, or stabilizing road shoulders;
- Use devices designed to clean mud and bulk dirt from tires such as steel grates, wheel shakers, or on-site wheel washes;
- Schedule regular vacuum street cleaning to remove accumulated dirt on roadways;
- For trucks hauling bulk materials to or from the site, fully cover and secure cargo loads and prevent leakage from truck beds, sideboards, tailgates, or bottom dump gates;
- Dust suppression using water, particularly when high winds are forecast or are occurring;
- Dust suppression using chemical dust suppressants applied and maintained in amounts and rates recommended by the manufacturer;

- Install permanent perimeter or interior fencing prior to other construction activities; (as with temporary windbreaks, this control measure is most effective on smaller sites);
- Contain all stockpiled bulk materials in three sided bunkers that are at least two feet higher than the stockpiled materials, or cover stockpiled materials;
- Water stockpiled materials that are susceptible to blowing, particularly when high winds are forecast or are occurring;
- Store stockpiled materials, if susceptible to blowing, away from downwind site boundaries;
- Reduce on-site traffic speeds; and
- Prevent storm water drainage from leaving the site.

BACM for Vacant Land, Disturbed Areas, and Parking Areas around Business, School, Residential, and Other Sites

Land that has been bladed for construction but left vacant is often highly susceptible to the generation of windblown dust. Additionally, business parks and residential areas that are newly constructed often have tracts of land that have been disturbed, removing native soils and vegetation. Methods for dust control at these sites include:

- Limit off-road use of recreational vehicles on open land;
- Vacant land stabilization;
- Construct windbreaks;
- Control weed abatement methods;
- Prohibit new unpaved parking lots;
- Stabilize surface of unpaved parking lots;
- Dust abatement and management plans for large tracts of governmentally owned lands;
- Pave parking areas or treat with a dust suppression chemical applied and maintained in amounts and rates recommended by the manufacturer. Otherwise, restrict parking in unpaved areas;
- Use grasses that require infrequent watering for school playgrounds; and
- Treat storage yards with a dust suppression chemical applied and maintained in amounts and rates recommended by the manufacturer, or with gravel.

Compliance Activity

Introduction

Reducing dust emissions from controllable sources is a requirement of the NEAP policy. The Department of Air Quality & Environmental Management (DAQEM) employs a four-part approach to achieving measurable reductions in emissions. The four parts of this approach are:

1. Education of site supervisors, dust monitors and water truck operators.
2. Issuance of advisories to the regulated community.

3. Concentrated enforcement and compliance activities.
4. Abatement of violating sites.

Education of site supervisors, dust monitors and water truck operators

The Clark County Air Quality Regulations (AQRs) require sites fifty (50) acres or more of disturbed soil to hire an on site person to monitor the emissions of dust from the site, commonly known as a “dust monitor”. Dust monitors are required to take a “Dust Monitor Class” given by the DAQEM. The class teaches the dust monitors “Best Management Practices” also referred to as BMPs. BMPs are methods to reduce dust emissions from construction sites. The class also teaches the dust monitors about the AQRs, methods, and technologies to reduce dust emissions. Site supervisors are required to take a “Dust Class” also given by the DAQEM, which teaches site personnel and water truck operators about BMPs and the applicable AQRs.

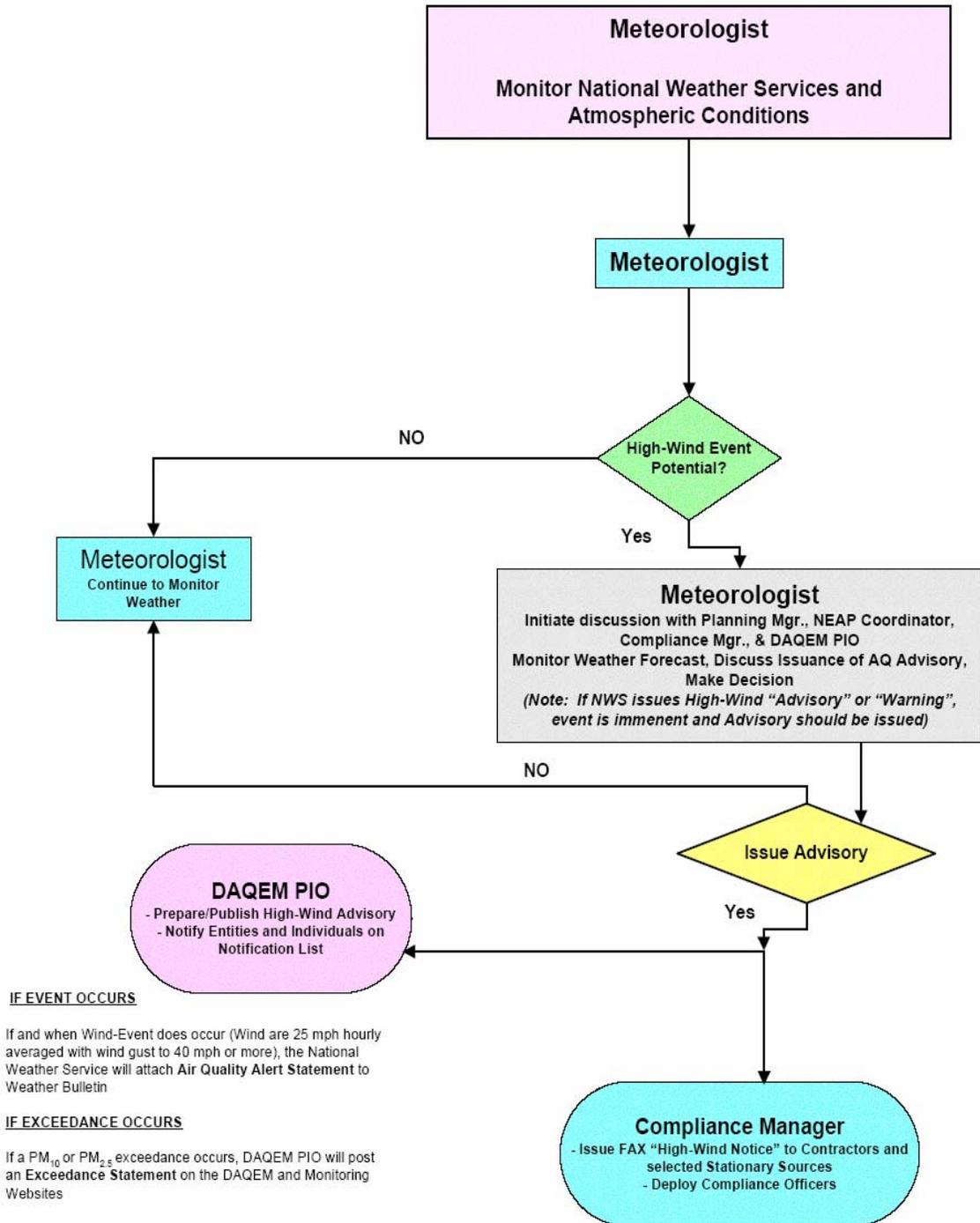
Issuance of advisories to the regulated community

Assigned staff monitor the National Weather Service (NWS) forecasts for predicted wind speeds (see Figure 5). If predicted wind speeds reach the threshold of sustained winds of 25 miles per hour or more, and/or wind gusts of 40 miles per hour or more, the process of issuing an advisory to the regulated community begins. The forecast is verified with the NWS to ascertain the likelihood of such an event occurring, the last day of measurable rainfall is verified, and a decision is made by assigned staff whether or not to issue an advisory to the regulated community. This process is concurrent with the process for issuing an air quality advisory to the public. If all the criteria are met, an advisory is issued to the regulated community via fax, telephone and email. Depending upon the certainty of the NWS forecast, advisories are issued 12 to 24 hours in advance of the high wind event, allowing the regulated community time to take the appropriate actions.

The advisory contains:

- The weather forecast;
- Expiration time of the advisory that is concurrent with NWS forecast (to the extent possible);
- Notice to the regulated community that compliance officers are out in the field to focus on potential sources of wind-blown PM₁₀;
- Advice to the regulated community to employ BMPs to mitigate the emission of fugitive dust; and
- Notice to the regulated community of the penalties possible for a violation.

Figure 5 - NEAP HIGH-WIND AIR QUALITY NOTICE AND RESPONSE



Concentrated enforcement and compliance activities

During the event, compliance officers are dispatched to the field to survey for violating sites. The areas of concentration of enforcement activities are determined from historical patterns, monitoring data, and complaints. Violators, at the discretion of the officer, are given a Corrective Action Order (CAO) which may lead to a Notice of Violation (NOV), and are ordered to employ BMPs to correct the violation. If the violation is especially egregious, the officer can recommend to their supervisor to issue an NOV instead of a CAO. The violator will receive the NOV through the DAQEM violations process procedure. In either case, the violators are ordered to employ BMPs to correct the violation.

Abatement of violating sites

The AQRs permit Clark County to require the abatement of violating sites with the use of a contracted water truck service (See Appendix E). This abatement may be used on sites when they are vacant or the owner/operator either cannot or refuses to abate the violation. The compliance officer obtains permission from their supervisor to initiate the abatement and the owner/operator is billed for the abatement. For more information, see Appendix E.

Section 5: CONTENTS OF JUSTIFICATION PACKAGES FOR EXEMPTION

Clark County projected attainment of the PM₁₀ NAAQS in the June 2001 PM₁₀ State Implementation Plan by the end of 2006. PM₁₀ exceedances caused by high-wind events count against meeting attainment, unless those events qualify under the U.S. EPA Natural Events Policy (NEP). Clark County must justify discounting those PM₁₀ exceedances by documenting that the exceedances occur due to overwhelmed BACM and contributions from native desert disturbed by high winds. It is the responsibility of the agency to demonstrate a clear causal relationship between the PM₁₀ exceedances and the high-wind event. Qualifying supporting documentation includes:

- Monitoring data;
- Filter analysis;
- Meteorological data (Wind speed, wind direction, precipitation);
- Modeling and receptor analysis;
- Videos and/or photographs of the event;
- Maps of the areas affected by the event;
- News accounts of the event; and
- Documentation of BACM being in effect for sources (anthropogenic) in the event area (compliance actions).

Background on Requirement of Justification

Figure 6, is the map of air quality monitoring sites located within the Las Vegas Valley. Clark County DAQEM operates a total of twenty-two (22) Air Quality Monitoring Sites within the Air Quality Monitoring Network. The Monitor Sites outside the Las Vegas Valley are:

1. The Apex site, located in Apex, Nevada in the Apex Valley, Hydrographic Area 216/217;
2. The Mesquite site, located in Mesquite, Nevada, in the Virgin River Valley, Hydrographic Area 222;
3. The Boulder City site, located in Boulder City, Nevada, in the El Dorado Valley, Hydrographic Area 167;
4. The Jean site, located in Jean, Nevada, in the Ivanpah Valley, Hydrographic Area 164A; and
5. The Searchlight site, located in Searchlight, Nevada, in the Paiute Valley, Hydrographic Area 214.

The remaining seventeen (17) sites are within the Las Vegas Valley, Hydrographic Area 212. The data from these monitoring sites is used to document a high-wind event. During the analysis segment of the justification submittal, the monitoring data for the day before, the day of, and the day after the event, including site meteorology (which includes the concurrence of McCarran International Airport meteorology data) is evaluated to compare and contrast how increased wind conditions have affected the monitoring

Compliance activity during the event is documented in the justification packages with the input of the compliance officers that were dispatched to the field to survey for violating sites. The areas of concentration of enforcement activities are determined from historical patterns, monitoring data, and complaints. Violators, at the discretion of the officer, are given a Corrective Action Order (CAO) which may lead to a Notice of Violation (NOV), and are ordered to employ BMPs to correct the violation. This process is part of the justification analysis to determine if BACM is being enforced. The Compliance Officers assist the Planning and Projects Staff in the documentation of unusual events that may occur during the high-wind event with digital photography (both still photography and video). These photos are included with the justification submittal to show visible proof of the high-wind event as it was occurring, the aftermath depicting property damage, or any other unusual situation photo (trees leaning at sharp degree, etc.). Each photo or video shall have a description of the situation that was occurring and show evidence of BAQM in place, or the lack thereof.

The news media plays a large role in the documentation of the event as it is occurring. News releases that warn of a high-wind event that is forecasted or occurring are coordinated between the County Public Information staff and the news networks and television stations. Newspaper articles and other news accounts of the event are included with the justification submittal.

Justification Packages Prepared to Date

On March 1, March 13, April 15, April 17, 2002, October 29, 2003, October 30, 2003, April 28, 2004 and May 11, 2004 the PM₁₀ monitors throughout the county recorded exceedances of the primary, 24-hour NAAQS for PM₁₀. The PM₁₀ exceedance concentrations ranged from just above the standard to 535 µg/m³. Unusually high wind speeds and peak gust of 59 mph were recorded on these days with little or no precipitation. The circumstances surrounding the Clark County exceedances has provided adequate reason for the DAQEM to believe the high-wind events and blowing dust have caused exceedances of the NAAQS that otherwise would not have occurred.

As required by the U.S. EPA Natural Events Policy (NEP), each of the exceedances have been flagged by the Department of Air Quality & Environmental Management's (DAQEM) Air Quality Monitoring Section in the Aerometric Information Retrieval System (AIRS). The flags appear after the recorded values in AIRS with the descriptor code "A" for high winds. According to U.S. EPA guidance, the type and amount of documentation provided for each event should be sufficient to demonstrate that the high-wind event occurred, and that it impacted a particular monitoring site in such a way as to cause the PM₁₀ concentrations measured.

An example of the documentation (*October 29, 2003 – High-Wind Event Justification Package*) forwarded to the U.S. EPA Region IX for an exceedance day can be found in Appendix F of the NEAP.

Effective March 16, 2005, DAQEM will post High-Wind Justification Submittal Packages (Packages) on the department website for thirty-days (30) and make printed

copies available for public review at the department. DAQEM will send out public notice to stakeholder groups soliciting comments on the packages prior to submittal of the packages to U.S. EPA. DAQEM will accept written public comments on the packages during the public comment period and will forward all public comments with any applicable DAQEM responses to the U.S. EPA, Region IX for review, and determination.

Section 6: STAKEHOLDER AGREEMENTS

Stakeholder Involvement

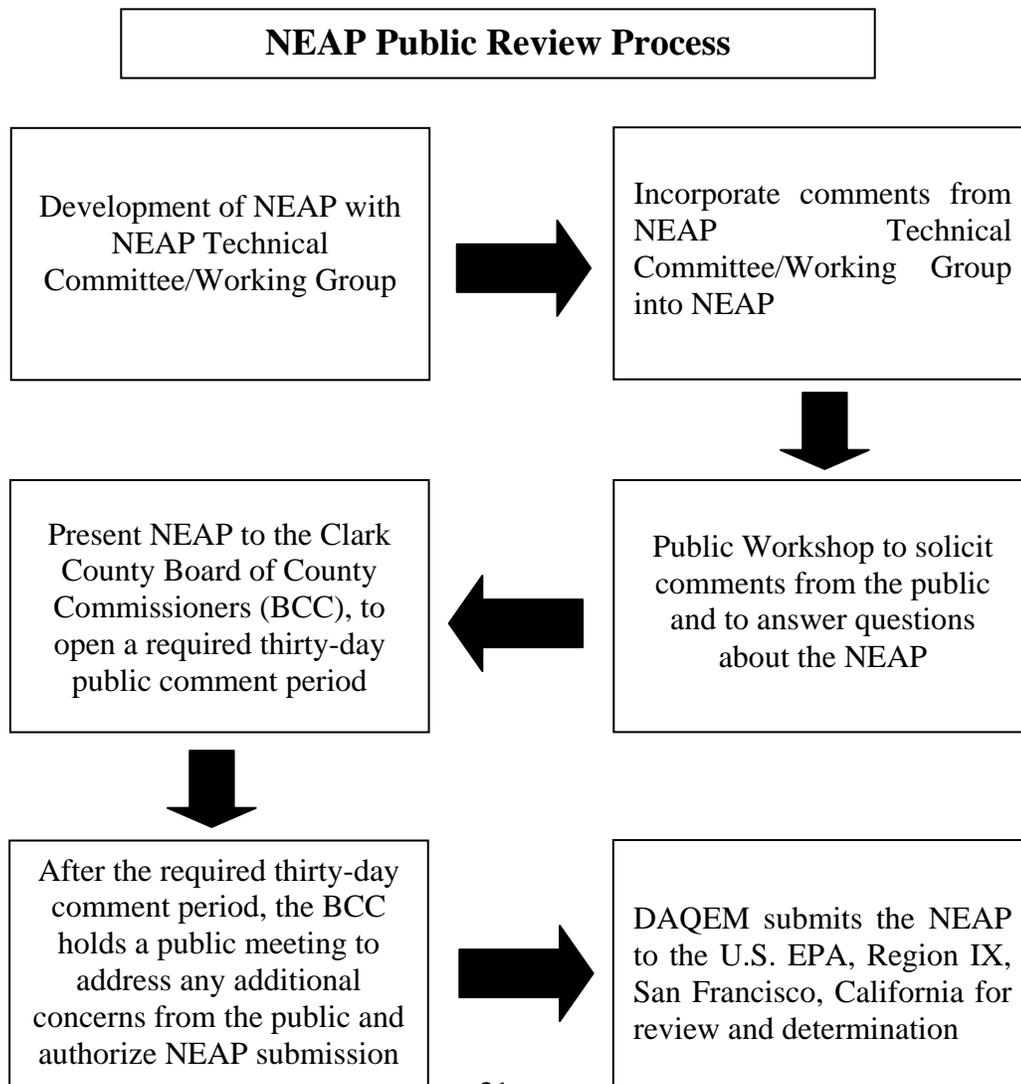
The U.S. EPA's NEP development guidance states that the NEAP should be developed by the agency in conjunction with the stakeholders affected by the Plan. The Department of Air Quality & Environmental Management (DAQEM) worked with stakeholders. This group consists of DAQEM personnel; representatives of the local municipalities; Clark County Health District; Clark County School District Educators; Southern Nevada Home Builders Association; Environmental Groups; National Weather Service Las Vegas Office; and the Conservation District of Southern Nevada. Numerous meetings and telephone conversations occurred with stakeholders, and the final agreement reflects support of control measures and public education efforts included as part of the NEAP. The municipalities mutually agreed to support this effort and will assist in the education efforts to support the NEAP requirements, as requested. The Sierra Club, Southern Nevada Chapter generally disagrees with the NEP, but does support the Public Education and Outreach Program Section (Section 2), and the Public Notification and Air Quality Advisory Program Section (Section 3), of the NEAP document.

Section 7: PUBLIC REVIEW AND COMMENTS

Public Review Process for NEAP Development

Public Review

The Department of Air Quality and Environmental Management (DAQEM) developed this NEAP with the assistance of a stakeholder committee (NEAP Technical Committee/Working Group). DAQEM incorporated the comments and suggestions from the stakeholder committee. DAQEM conducted a public workshop to solicit comments, and answer questions about the NEAP. After the public workshop, DAQEM presented the NEAP to the Clark County Board of County Commissioners (BCC), at a regular meeting, where the BCC accepted the plan and opened the required thirty-day public comment period. The required thirty-day comment period ensured ample time for review and comment (see Appendix G for notifications, etc.). At the end of a required thirty-day comment period, the BCC held a public meeting to address any additional concerns from the public. The BCC authorized the DAQEM to finalize the NEAP, and submit the NEAP to the U.S. EPA for review and determination.



NEAP Technical Committee/Working Group

The stakeholder committee assisted in the Quality Control and Quality Assurance (QA/QC) phase of the development and public review of this NEAP. The stakeholder committee consisted of representatives from the DAQEM, Clark County Health District, Clark County School District, Southern Nevada Home Builders Association, Environmental Groups, National Weather Service, Las Vegas Office and the Conservation District of Southern Nevada, the cities of Henderson, North Las Vegas, and Las Vegas. Individual participants may change from time to time, as necessary, by written request of the appointing authority of the group, organization, or municipality.

Section 8: PERIODIC EVALUATION (Due every 5-years)

Periodic Evaluation

U.S. EPA's Natural Events Policy guidance requires the Department of Air Quality & Environmental Management (DAQEM) to periodically reevaluate the conditions causing violations of the PM₁₀ NAAQS in Clark County; status of implementation of the NEAP; and adequacy of the actions being implemented.

The agency will formally evaluate the NEAP for Clark County at a minimum of every five (5) years and make appropriate changes to the plan accordingly. The first formal evaluation is scheduled for early 2010. In addition to the formal review, an annual review will occur during the first six months of each calendar year, prior to the new fiscal year. This review will allow for any additional program additions requiring funding that were not budgeted for in the previous year's budget.

As part of the public review, formal review and annual evaluation of the NEAP document, the same entities that serve on the existing NEAP Technical Committee/Working Group will be asked to serve on the panel to evaluate the effectiveness and the update requirements of the Clark County NEAP as appropriate.