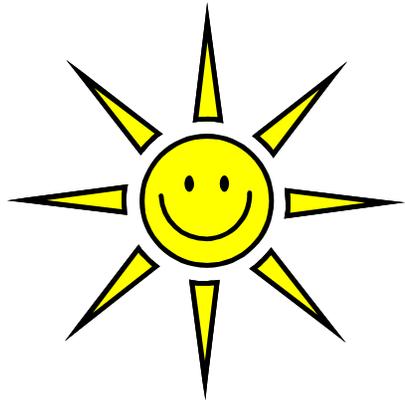




# Keeping Dust Down and Growth Up in New Mexico

A Plan for Reducing Dust, Sustaining  
Growth, and Improving Health and Vistas

2004



## What is the Air Quality in New Mexico?

- Throughout most of the year, the air quality is **excellent** and **clean**.
- However, on days when winds are high, windblown **dust** levels can be high enough to exceed standards.
- Counties in southern New Mexico (Chaves, Doña Ana, Lea, Luna) have experienced violations of the National Standard.



## The Issue:

High winds pick up dust from the desert and human-made sources. **High dust levels** in Chaves, Doña Ana, Lea, and Luna Counties can **exceed** health standards. Sources of dust include the natural environment itself and land that people disturb in a variety of activities.

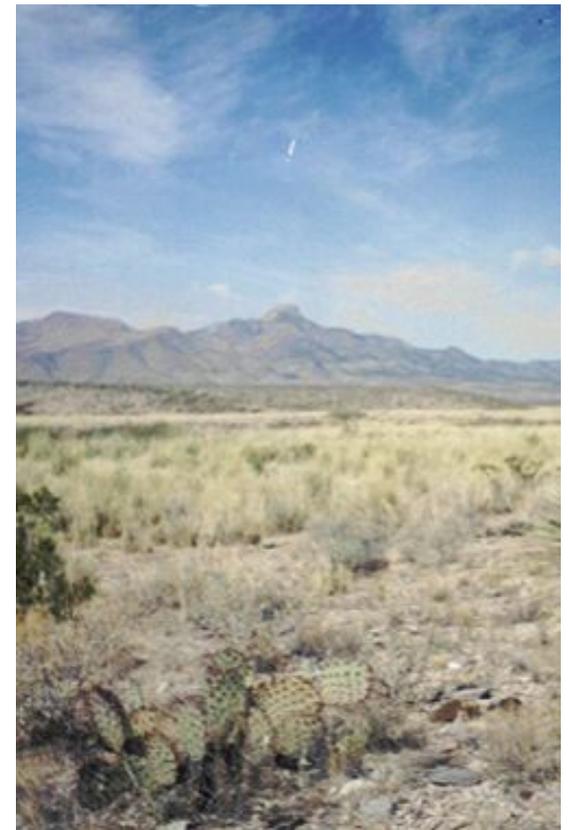




## The Solution:

Put together a plan to control human-made sources of dust when and where possible. Protect health and the area's reputation and avoid a **non-attainment** designation.

Understand that the winds may sometimes overwhelm even our best efforts.





# Dust Sources

- \* Natural desert areas/undisturbed arid lands
- \* Soil disturbance during construction projects
- \* Cleared and vacant areas
- \* Unpaved roads, parking lots, playgrounds
- \* Tilled fields
- \* Military training exercises
- \* Unpaved equipment yards.



# Why is **Dust** a public health issue?



- \* Under the Federal Clean Air Act (1970), EPA established maximum standards for six major air pollutants to protect public health.
- \* Particulate matter is one of the six pollutants.
- \* Standards were set based upon health criteria.
- \* Particulate matter, PM10, refers to particles less than or equal to 10 microns in diameter - About 1/7 the diameter of a human hair.
- \* PM10 is made up of many things such as **dust**, smoke, and soot.

# Why is **Dust** a public health issue?



When inhaled, tiny particles can lodge deep in the lungs and can:

- \* increase breathing problems
- \* damage lung tissue
- \* aggravate existing health problems.

PM10 pollution can also:

- \* reduce visibility, resulting in accidents
- \* impair the health of animals and vegetation
- \* reduce crop production
- \* reduce the quality of life.



<b>AIR QUALITY CATEGORY (for PM10)</b>	<b>POTENTIAL HEALTH EFFECTS</b>	<b>RECOMMENDED PRECAUTIONS</b>
<b>Hazardous</b>	Serious risk of respiratory symptoms and aggravation of lung disease, such as asthma; respiratory effects likely in general population.	Everyone should avoid any outdoor exertion; people with respiratory disease, such as asthma, should remain indoors.
<b>Very Unhealthy</b>	Significant increase in respiratory symptoms and aggravation of lung disease, such as asthma; increasing likelihood of respiratory effects in general population.	People with respiratory disease, such as asthma, should avoid any outdoor activity; everyone else, especially the elderly and children, should limit outdoor exertion.
<b>Unhealthy</b>	Increased respiratory symptoms and aggravation of lung disease, such as asthma; possible respiratory effects in general population.	People with respiratory disease, such as asthma, should avoid any outdoor activity; everyone else, especially the elderly and children, should limit outdoor exertion.
<b>Unhealthy for Sensitive Groups</b>	Increasing likelihood of respiratory symptoms and aggravation of lung disease, such as asthma.	People with respiratory disease, such as asthma, should limit outdoor exertion.
<b>Moderate</b>	None	None
<b>Good</b>	None	None



What happens when violations occur?

Non-attainment designation by EPA

or

Natural Events Action Plan



We Choose the NEAP!



## What is **Non-attainment**?

Traditional way of dealing with excessive pollution

- \* controls and reduces pollution from sources (industry, motor vehicles, etc)
- \* possible negative economic effects
- \* many areas around the country struggle with non-attainment status for years





## What is **Non-attainment**?

Western states viewed this traditional approach as ineffective for dealing with a PM10 problem due to blowing dust raised by high winds.

Western states worked with EPA to devise a policy so western counties would not be blamed for air quality standard violations caused by circumstances out of their control (high winds).

The result is the Natural Events Policy, which makes a **Natural Events Action Plan** an option.



## What is in a **Natural Events Action Plan**?

**A NEAP includes the following parts:**

- \* Document when and to what extent natural events affect PM10.
- \* Inform the public about the harmful health effects of particulate matter.
- \* Minimize public exposure to high levels of PM10 using notification and health advisory program.
- \* Actions needed to reduce particulate matter (when and where) possible during natural events





## What a **Natural Events Action Plan** does and does not do...



**Does** provide alternatives for controlling significant human-created sources of **dust**.

**Does** understand that high winds may sometimes override our best **dust** control efforts.

**Does not** require control of wind.

**Does not** require control of natural sources of windblown **dust**.



## NEAP

- \* Local community control of local problem
- \* Flexibility to develop a sensible dust control plan
- \* Community perceived as a clean place to live, play and work
- \* **Proactive**

VS



## Non-attainment

- \* Negotiated with EPA
- \* Do at least what is required in a NEAP, and maybe more
- \* Stigma of an unclean and unhealthy place
- \* **Reactive**





# What activities may need **dust** control in Chaves, Lea and Luna Counties?

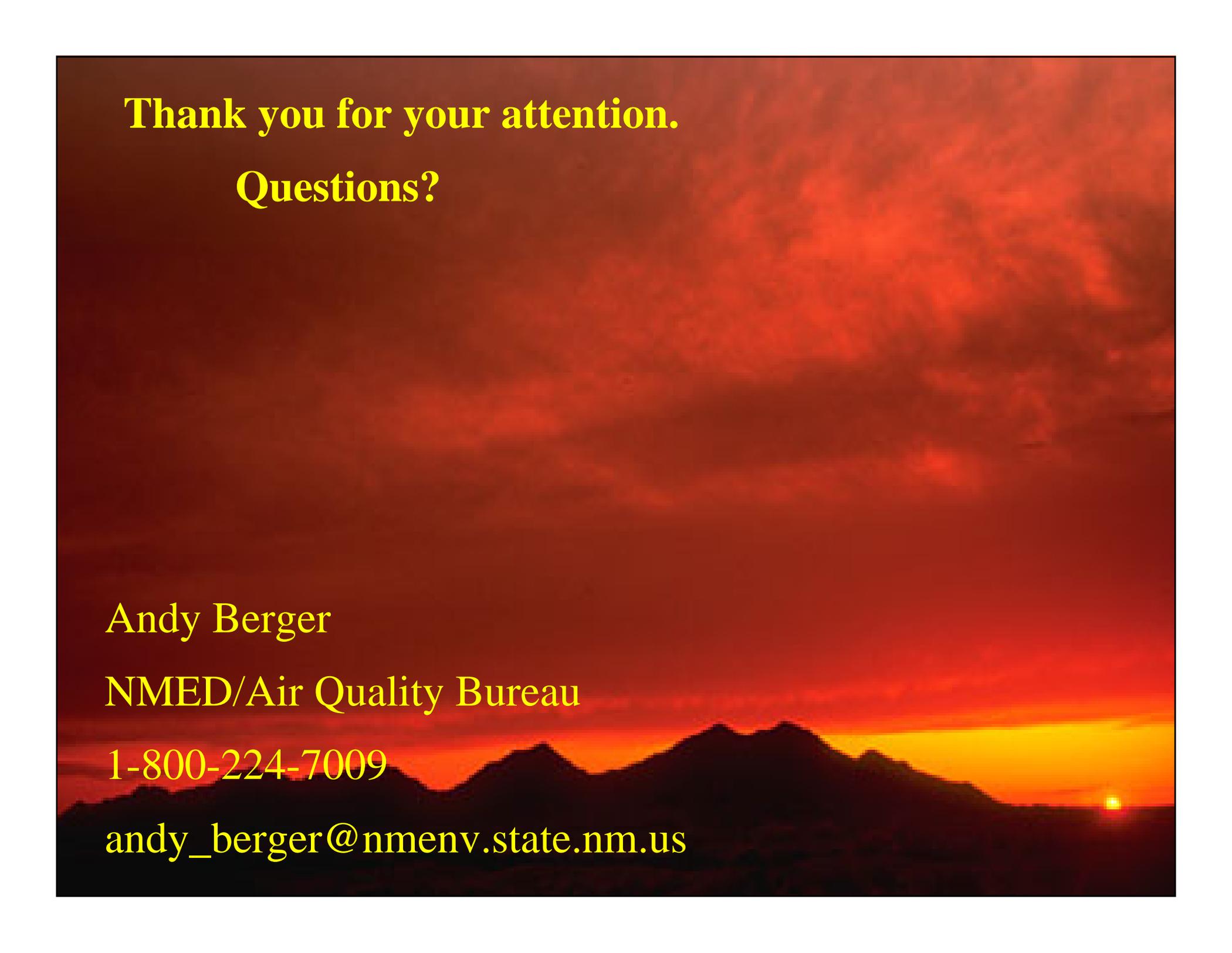
- \* Construction projects
- \* Work on paved or unpaved roads
- \* Using unpaved parking lots
- \* Work on vacant land or disturbed areas
- \* Using equipment yards
- \* Using agricultural areas



## Possible **dust control** measures

- \* Dust suppressants
- \* Paving
- \* Graveling
- \* Re-vegetate / xeriscape
- \* Organic mulches
- \* Silt fencing
- \* Erosion control mats
- \* Smart timing
- \* Wind breaks
- \* Water
- \* Speed limits





**Thank you for your attention.**

**Questions?**

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