

MCA 2000-005

A COOPERATIVE APPROACH TOWARDS REDUCING PM10 IN THE GRAND VALLEY IN MESA COUNTY, COLORADO

MEMORANDUM OF AGREEMENT

Between the Colorado Department of Public Health and Environment, Air Pollution Control Division, the City of Grand Junction, and Mesa County.

PARTIES:

Policy & Planning Section , Air Pollution Control Division, at the Colorado Department of Public Health and Environment (CDPHE) with the physical address at 4300 Cherry Creek Drive South , Denver, Colorado 80246-1530. The mailing address is the same. Business phone is 303-692-3100 and the fax number is 303-782-5493.

Mesa County, with the physical address at 544 Rood Avenue, Grand Junction, Colorado 81501. The mailing address is PO Box 20000, Grand Junction, Colorado 81502-5033. Business phone is 970-244-1800 and the fax number is 970-244-1689.

City of Grand Junction with the physical address at 250 North 5th Street, Grand Junction, Colorado 81501-2668. The mailing address is the same. Business phone is 970-244-1504.

PURPOSE:

The purpose of this Memorandum of Agreement (MOA) is to create an understanding between the Colorado Department of Public Health and Environment - Air Pollution Control Division (CDPHE Air Division), the City of Grand Junction, and Mesa County with regard to establishing a continued planning process to address monitored high particulate matter exceeding 10 microns in diameter (PM10) levels in the Grand Valley because the National Ambient Air Quality Standard (NAAQS) may be close to being exceeded. This coordinated process will provide:

- 1.) A better understanding of the local and regional sources contributing to high PM10 levels;
- 2.) Methods to protect the public from potential exposure to high levels of PM10;
- 3.) Methods to assess and periodically evaluate the effectiveness of current and potential new measures to mitigate local emissions of PM10;
- 4.) If or when there are indications that high wind and/or blowing dust conditions contribute to an exceedance of the PM10 NAAQS in the Grand Valley airshed, ensure proper documentation is prepared and submitted to USEPA, as required by the Exceptional Events Rule, and,
- 5.) Ensure all parties to this MOA have the opportunity to be directly involved in discussions of Exceptional Event determinations.

This Memorandum and information developed from its implementation is intended to provide a framework that will be part of an ongoing process to help ensure that the Air Division properly responds to all exceptional events impacting the Grand Valley, and that Mesa County and the City of Grand Junction continue to work to implement "Best Available Control Measures" (BACMs) to help manage fugitive dust within acceptable levels.

INTRODUCTION:

1. Air quality is intuitively and obviously important to the people of the Grand Valley, as shown by civic, community, political, and popular support of many initiatives over the last 30 years.
2. Monitoring of air quality is essential to bring science to bear on political decision-making. It takes facts to know what is changing, and what can be encouraged or mitigated by regulation.
3. Recorded air quality data is most useful and accurate to demonstrate long-term trends. The continuous and historical record is very valuable for accurate understanding of something as

complex as the Grand Valley airshed. Separating man-made PM10 effects from natural events can be challenging.

4. Federal regulatory standards and federal involvement are not matters of choice for the staff of the Mesa County Health Department (MCHD), the Mesa County Air Quality Planning Committee (MCAQPC), the Mesa County Board of Health (BOH), the City of Grand Junction or the CDPHE Air Division.
5. Exceeding the USEPA standards for air quality is not penalized as an occasional and infrequent event. USEPA recognizes that a very few exceptional data points should not result in regulatory action. The exceedances might be just that, "exceptions." However, if too many occur too frequently, they are no longer outliers and the result is regulatory action.
6. If an atmospheric event in the Grand Valley airshed is to be classified as an exception, the local decision can often be intuitive, obvious, and simple. For example, blowing dust can be seen west of the Monument and into the desert toward Cisco, Utah. The USEPA's concurrence with that decision requires detailed documentation.
7. Cooperation between Mesa County and the CDPHE Air Division in providing prompt health notification to the public, collecting, collating, and verifying data on an event is official recognition that such joint efforts are ongoing and in agreement, i.e., all parties are working with consensus to understand and mitigate effects of the event as much as possible.
8. Failure to gain USEPA concurrence with the "exceptional event" designation can result in restricted business and personal activity due to non-attainment with the air quality standards. Enforcement is far-reaching and difficult to overcome. The cost in staff time (local and state) far exceeds the costs of these pre-emptive cooperative efforts.

BACKGROUND:

1. The Grand Valley area is affected by PM10 generated locally and from other states and is susceptible to high wind events that transport PM10 into the valley airshed. The area is susceptible to blowing dust from high wind events during drought conditions. The City of Grand Junction and Mesa County currently implement adopted dust control regulatory measures and will continue to evaluate new approaches to reducing local contributions to particulate matter air pollution.
2. USEPA's Exceptional Events (EE) Rule (See, "Treatment of Data Influence by Exceptional Events", 72 FR 13560, May 21, 2007) lays out specific requirements for the treatment of air quality monitoring data.
3. Per the EE Rule, the CDPHE Air Division has provided USEPA a detailed technical analysis of past high events. This submittal has included analyses showing impacts from out-of-state transport of PM10, and the climatological factors contributing to PM10 levels in Grand Junction.
4. The City of Grand Junction and Mesa County have provided through the MCAQPC an overview and summary of the BACMs being implemented currently by the county and the City. The EPA EE Rule also requires an assessment of the local contribution to monitored levels, a determination that BACM is being implemented, and an effective local notification protocol that functions to protect sensitive individuals from unnecessary exposure.
5. The CDPHE Air Division and the MCAQPC have worked together in a collaborative fashion in a number of areas in the past to improve community air quality programs and increase awareness about air quality issues in the Grand Valley and are willing to continue to do so to address the implementation of this MOA.

AGREEMENTS:

1. The CDPHE Air Division will continue to cooperatively work with the county health department in conducting ambient monitoring in the Grand Valley, report all data to the AQS (Air Quality System that stores all ambient air data in the country) and provide the lead in developing any necessary response to any flagged data (Exceptional Events).
2. The CDPHE Air Division will work in partnership with Mesa County in the process of developing and submitting Exceptional Event responses to the USEPA.
3. The CDPHE Air Division will provide technical and other assistance in establishing a high wind advisory capability in Mesa County.
4. The CDPHE Air Division will provide reports of ongoing monitored levels as well as any reports or analyses conducted in response to Exceptional Events.
5. The CDPHE Air Division will provide reasonable and appropriate technical assistance in regard to agreed to technical activities such as development of emission inventories or assessment of BACMs.
6. The CDPHE Air Division will provide periodic reports of the status of compliance of stationary sources in the Grand Valley as well as any permit applications for Mesa County and nearby areas
7. The Mesa County Health Department, with assistance from the MCAQPC, will serve as the lead agency in terms of public health information and issued high wind advisories.
8. By January 2010, the Mesa County Health Department and MCAQPC will develop, or be the focal point of developing, a local notification protocol for specific blowing dust events. The protocol will include a description of local initiatives, public awareness and notification efforts that will occur preceding and during specific blowing dust events that may result in the exceedance of the PM10 NAAQS.
9. The City of Grand Junction and Mesa County will continue to implement the list of dust control regulatory measures described in the report transmitted to the CDPHE Air Division in January of 2009. A copy of that list is attached and incorporated by this reference as if fully set forth.
10. The City of Grand Junction and Mesa County will work with the Mesa County Health Department staff and CDPHE Air Division staff to track implementation and review the effectiveness of the dust control measures, determine if modifications are needed, and submit a report to the CDPHE Air Division on the effectiveness and scope of dust control strategies for which the City and County has responsibility. The first formal report will be provided to the CDPHE Air Division from the City and County one year after this MOA is agreed to and every two years after that.

MILESTONES:

1. By January 2010, the parties will develop and implement a local notification protocol which would include a public health and high wind and dust advisory component.

2. Within one year of MOA approval by all parties, the CDPHE Air Division, City of Grand Junction, and Mesa County will complete a review of currently implemented BACMs and determine if current measures need to be enhanced and/or new control strategies added.

FINANCIAL CONSIDERATIONS:

Except where otherwise detailed in this MOA, each party is responsible for its own costs. Any assistance provided by the State of Colorado under this MOA and any assistance provided by the County and/or City is subject to the availability of appropriations. Any and all financial assistance provided by the state will be done pursuant to in compliance with the State of Colorado fiscal rules and procurement code (e.g. a separate written agreement that complies with the state fiscal rules).

SETTLEMENT OF DISPUTES:

The parties agree to good faith consultation with one another to resolve disagreements that may arise under or relating to this MOA before referring the matter to any other person or entity for settlement.

EFFECTIVE DATE:

This MOA shall be effective upon the signature of all parties for a period of five (5) years. This MOA may be amended if mutually agreed upon, to change scope and terms of the MOA. Such changes shall be incorporated as a written Amendment to the MOA. This Agreement may be terminated by any party at any time; however, the terminating party shall provide written notice to the other parties at least thirty (30) days in advance of the effective date of termination unless there is a critical failure to perform.

This MOA shall begin upon signature by all parties.

SIGNATURES:

Martha Rudolph, Executive Director
Air Division, Colorado Dept. of Public Health and Environment

_____ Date: _____

For the County
Mesa County, Colorado



Craig J. Meis
Chairman

_____ Date: January 25, 2010

For the City
Grand Junction, Colorado

_____ Date: _____

Mesa County Air Quality Control Measures:

Voluntary Control Measures

On July 9, 2008 Perry Buda, Air Quality Specialist, Mesa County Health Department requested that the former Lewco recycling property, a large vacant lot located near the Grand Junction air monitoring station, be treated to prevent fugitive dust emissions. The property owner, John Spendrup promptly responded to the requested by applying magnesium chloride to the site on July 14th. A recent conversation with Mr. Spendrup revealed that he would continue to monitor the site for the need to re-apply dust palliative.

Land Development Code (effective May 2000) §7.16.1 Streets and Roads

When a development plan proposes improvements to a street or road that requires right-of-way in excess of the minimum requirements of the Mesa County Standard Specifications for Road and Bridge Construction, additional right-of-way will be required from the developer to accommodate the proposed plan. Streets, roads and pedestrian/bicycle paths shall be designed as shown in any adopted Transportation or Circulation Plan and constructed in conformance with the current Mesa County Stand Specifications for Road and Bridge Construction and its appendix, the Road Access Policy. All new public or private roads constructed within the Grand Valley Airshed shall be paved. Farm service and canal/ditch/drainage maintenance roads are exempt from this paving requirement.

Mesa County Air Quality Planning Committee

Established in 1992 as an advisory committee to the Mesa County Board of Health, the twelve member committee consists of representatives from government, industry, education, medical and legal sectors of the community. The committee has implemented the Western Slope Air Watch. During the winter months of November through February, the Western Slope Air Watch serves to inform the public in a timely manner of air quality conditions for residential wood stove use. Daily afternoon advisories using the "Blue Flame OK" or "Red Flame NO" burning symbols are issued to local media who announce the advisories to the public during afternoon and evening newscasts. In addition, 24-hour hotline numbers are updated daily with the latest air quality advisories for the Grand Valley in Mesa County and the Uncompahgre and Gunnison River Valleys in Delta and Montrose Counties.

Mesa County Solid Waste Management

The composting facility opened in Mesa County in September of 2001. Goals of the facility includes; improvement of Mesa County's air quality, providing a valuable soil amendment, and extending landfill life. Burning leaves and other yard wastes pollutes the air and can lead to uncontrolled fires. Yard waste smoke that lingers in the Grand Valley is an eyesore and can make breathing difficult for people who suffer from asthma, emphysema, or seasonal allergies. The composting facility utilizes an aerated windrow method of composting, which is the most common method of composting in Colorado. This involves stacking the yard waste into rows that are periodically turned, blended, and aerated.

Open Burning Ban

The Mesa County Air Pollution Control Resolution on Open Burning (MCM 2002-066) prohibits open burning throughout the Grand Valley Airshed unless a valid permit has been obtained from the appropriate air pollution or fire control authority. In granting or denying any such permit, the authority shall base its action on the potential contribution to air pollution in the area, climatic conditions on the day(s) of such burning, and the authority's satisfaction that there is no practical alternative for the disposal of the material to be burned. Open burning permits will only be issued during the spring and fall burning seasons.

Stormwater Management Manual (SWMM)

As mandated under the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has developed a National Pollutant Discharge Elimination System (NPDES) stormwater permitting program consisting of two phases. Phase I, started in 1990, addresses the large metropolitan areas of the country. Phase II, started in 2003, smaller urbanized areas, such as the Grand Valley. As with stormwater quantity many agencies are involved with stormwater quality, Mesa County, City of Grand Junction, Town of Palisade, Grand Junction Drainage District, Orchard Mesa Irrigation District, Grand Valley Water Users, and School District 51 are all regulated by Phase II stormwater regulations.

The Stormwater Management Manual (SWMM) addresses particulates in the two sections listed below.

1103.5 Sedimentation and Debris

Sediment and debris buildup may occur on streets in any area where flow velocities tend to decrease such as near grade changes and inlets. Sediment and debris buildup can have a significant impact on the flow capacities of gutters and streets, causing increased flow width and thus increased interference with traffic movement. Locations where significant deposits may occur should be identified for maintenance purposes to include street sweeping and inlet cleanout as necessary. Inlets should be designed to function properly based on expected sediment and debris clogging as specified later in this section. Localized sedimentation issues due to construction activities should be controlled per the criteria presented in Section 1500 of this Manual.

1503.1 Stormwater Discharge Limitations

All stormwater discharges from construction sites disturbing one-acre or more shall meet the following standards:

- a. Stormwater discharges from construction activities shall not cause or threaten to cause pollution, contamination or degradation of Waters of the State.
- b. Concrete wash water shall not be discharged to state waters or to storm sewer systems.
- c. Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State waters.
- d. All wastes composed of building materials must be removed from the site for disposal in licensed disposal facilities. No building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- e. Off-site vehicle tracking of sediments shall be minimized.
- f. Land disturbances shall be conducted in a manner to effectively reduce accelerated soil erosion and sedimentation.

City of Grand Junction Air Quality Control Measures:

1. City Code of Ordinances

A. Article VI. Air Pollution

I. Sec 16-128. Air quality; declaration of policy.

Air quality is an important part of the health, safety and welfare of the community. City Council desires to protect and improve air quality in and around the City, not only for the health, safety and general welfare of its citizens, but also because air pollution resulting from the use of wood stoves hurts the aesthetic and economic welfare of the community. Present levels of air pollution which occur during winter inversions in the Grand Valley are unacceptable. The Grand Valley Air Quality Planning Committee has studied and made recommendations concerning local efforts which can protect the air quality in the Grand Valley. The City Council endorses such efforts.

II. Sec 16-126. Control of dust-producing areas

It shall be unlawful for any person to own, possess or control a cleared area, parking lot, vacant lot or other site used by vehicular traffic without implementing an effective abatement or preventive fugitive dust-control measure, as may be required, which may include, but is not limited to, the following:

1. Wetting down of the dust-producing area;
2. Landscaping;
3. Covering, shielding or enclosing;
4. Paving on a temporary or permanent basis;
5. Treating through the use of palliative and chemical stabilization.

III. Sec. 16-130 Regulation of new solid fuel burning devices – clean stoves only.

No wood stove or fireplace shall be installed within any structure, mobile home, building or home within the City unless it is a clean stove (ie USEPA approved).

IV. Sec. 16-131. Solid Fuel burning during high pollution days – prohibited.

It shall be unlawful for any person to operate a wood stove or a fireplace during a high pollution day unless an exemption has been granted pursuant to this provision or unless such wood stove is a clean stove.

V. Sec. 16-132. Elimination of nonconforming wood stoves.

For each transfer of ownership or property which occurs after September 1, 1997 on which is installed or used a wood stove which is not a clean stove other than an exempt wood stove, the transferor, grantor or seller shall prior to any transfer of ownership: replace such wood stove with a clean stove; replace such wood stove with a gas stove; or remove such wood stove.

B. Chapter 33. Zoning and Development Code

Chapter Six: Design and Improvement Standards

Sec. 6.2 B. Streets, Alleys, Trails and Easements: Design Standards.

- a. Street and alley layouts shall conform to adopted street plans and other policies, as well as Transportation Engineering Design Standards.
- d. Streets, alleys, sidewalks, trails and bike paths shall be constructed in accordance with applicable City standards.

Sec. 6.6 A. Off-Street Parking Vehicle Traffic Areas

- 9. All driveways and parking areas, except for a single dwelling on one lot, shall comply with the following:
 - a. All required parking and vehicular traffic surfaces shall drain and be surfaced with concrete or bituminous pavement in accordance with City standards. The City Engineer may permit a gravel surface in overflow parking areas, a low traffic storage yard, or if the applicant establishes that very little dust will be generated. "Overflow parking" is defined as "parking in addition to the minimum required by ordinance which is designed not to be used more than ten times per year." A "low-traffic storage yard" is defined as "a storage area generating less than thirty average daily trips." Industrial yards that accommodate large trucks and/or heavy equipment shall be surface and maintained with materials to prevent dust, mud and debris from leaving the site and being tracked onto the public right-of-way.
 - b. All surfaces shall be maintained in good condition free of weeds, dust trash and debris.
 - c. A temporary parking lot shall be used after the owner has an approved site plan for up to 24 months from issuance of a city site plan for such parking use. The temporary parking lot shall be maintained in good condition free of weeds, dust, trash and debris.

C. Ordinance No. 3824: Stormwater Pollution Prevention

Sec. 16-143. Control of Stormwater Discharges from Construction and Post-Construction Activities

(5) Erosion and Sediment Control. BMPs shall be implemented to prevent the release of sediment from construction sites and development. Disturbed area(s) shall be minimized and disturbed soil, including but not limited to construction sites and entrances and exits there from, shall be managed to prevent tracking, blowing and fugitive emissions release.

2. Municipal Standards

A. Transportation Engineering Design Standards

The City of Grand Junction / Mesa County Transportation Engineering Design Standards require all commercial, industrial, urban residential, collector and rural streets be surfaced with hot bituminous pavement or Portland cement concrete.

B. Grand Valley Circulation Plan Integrated Transportation System

The Integrated Transportation System is designed to create an integrated system of streets, subdivisions and developments to provide for the efficient movement of vehicular and other traffic to and from adjacent developments while encouraging the use of mass transit. This avoids traffic congestion which could impact localized air quality problems. Proposed development projects must submit for review an analysis of the transportation impacts of a project. This analysis includes a transportation impact analysis, total traffic

projections, site design and circulation evaluation, trip generation, trip distribution and assignment of project traffic to minimize traffic congestion.

The Riverside Parkway project, recently completed in August 2008, was designed primarily to alleviate congestion and route traffic away from the downtown core area, increasing traffic efficiency and minimizing localized concentrations of vehicle exhaust.

3. Control Programs

A. Municipal street sweeping measures

The City of Grand Junction utilizes modern regenerative street sweepers as well as mechanical street sweepers to clean streets on a frequent basis to control fugitive dust and particulate matter and improve stormwater quality. Downtown streets are swept at least once per week. Principal arterial and minor arterial streets are swept one to two times per month. Collector and residential streets are swept once every two months.

B. De-icing procedures

The City of Grand Junction uses a combination of Ice Slicer (salt treated with magnesium chloride, potassium chloride and rust inhibitors) and magnesium chloride liquid solution to improve public safety and control ice on city streets. Ice Slicer and magnesium chloride are used instead of sand in order to control particulate dust emissions and because it is more effective in preventing (anti-ice operations) and fighting ice build up (de-icing operations) on streets.

A description of the City's Snow Plan and map of City streets that receive de-icing treatments can be viewed at: <http://www.gjcity.org/CityDeptWebPages/PublicWorksAndUtilities/StreetsTraffic/PDF/SnowPlanBrochure2007.pdf>



Date: 01/06/10

Author: Eileen List

Title/ Phone Ext: JPT Coordinator

Proposed Schedule: _____

2nd Reading _____

(if applicable): _____

CITY COUNCIL AGENDA ITEM

Subject: Air Quality Memorandum of Agreement
File # (if applicable):
Presenters Name & Title: Mike Brygger, Mesa County Health Department Air Quality Specialist

Executive Summary:

The City of Grand Junction has been requested by the Colorado Department of Health and Environment Air Quality Division (CDPHE) to sign an Air Quality Memorandum of Agreement (MOA) with Mesa County and CDPHE. The purpose of the MOA is to address elevated air dust levels of concern in the Grand Valley that exceed the federal particulate matter standard (PM10, or dust) and to determine if the elevated dust levels are regional or not.

How this item relates to the draft Comprehensive Plan Goals and Policies:

Goal 9 – developing a well-balanced transportation system that supports transportation movement while protecting air, water and natural resources. The MOA recognizes air quality is important to the Grand Valley community not only for public health but also impacts on federal lands and national parks near Grand Junction.

Action Requested/Recommendation:

Council is requested to sign the Memorandum of Agreement, titled "A Cooperative Approach Towards Reducing PM10 (dust levels) in the Grand Valley In Mesa County, Colorado."

Board or Committee Recommendation:

The Mesa County Air Quality Advisory Committee, the Mesa County Health Department and the Mesa County Board of Health support the MOA. The Mesa County Board of Health is recommending the Mesa County Board of County Commissioners sign the MOA on January 25, 2010.

Background, Analysis and Options:

Grand Valley air quality is affected by dust generated locally and from other states. High wind events can transport dust into the Valley airshed and have negative health effects on the public.

The United States Environmental Protection Agency (USEPA) is concerned that dust measured in the Grand Valley has the potential to exceed federal PM10 levels and are interested in local measures to control dust to avoid violating the air standard. Both Grand Junction and Mesa County currently have regulatory control measures in place (ie street sweeping program, control of mud tracking from construction sites, paved lot requirements) to control dust emissions.

Local governments in the Grand Valley recognize that they have no control over wind-blown dust from other states. The MOA provides a framework to provide a better understanding of the local and regional sources contributing to high dust levels and to implement media announcements to protect the public from unhealthy exposure to high levels of dust.

Financial Impact/Budget:

The MOA will not result in financial impacts to either Grand Junction or Mesa County. However, if the PM10 air standard is violated the USEPA will require additional controls and resources, above and beyond current control measures, be put in place.

Legal issues:

The MOA is being used to demonstrate to USEPA that the City of Grand Junction, Mesa County and the State Air Quality Division are proactively seeking methods to avoid violating federal air quality PM10 standards.

Other issues:

None

Previously presented or discussed:

NA

Attachments:

Memorandum of Agreement, "A Cooperative Approach Towards Reducing PM10 in the Grand Valley In Mesa County, Colorado"

**CALL TO ACTION
National Weather Service**

Proposed "Call to Action Statement" for Weather Service to Issue during Dust Storms in Grand Valley. These will be added to all "Wind Advisory" and "High Wind Warnings" issued by the Weather Service when these criteria are met:

- **Wind Advisory issued for the Grand Valley**
- **High Wind Warning issued for the Grand Valley**
- **Issued during all seasons of the year**

Final Statement approved by National Weather Service 10/22/09:

"People, especially those with respiratory illnesses, heart disease, the elderly, and children are recommended to stay indoors and avoid prolonged outdoor exercise or heavy exertion due to wind-blown dust."

Wind Criteria:

Wind Advisory – Valleys: Sustained 30-39 mph for \leq 1 hour OR \leq gusts of 45 to 57 mph for any duration

High Wind Warning – Valleys: Sustained \geq 40 mph for \leq 1 hour OR \leq 58 mph gusts for any duration