MARICOPA ASSOCIATION of GOVERNMENTS

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January 25, 2007

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Stephen S. Cleveland, Goodyear City Manager, Chairman

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, February 1, 2007 - 1:30 p.m.
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue, Phoenix

Please park in the garage underneath the building. Bring your ticket to the meeting; parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

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Members of the MAG Air Quality Technical Advisory Committee may attend in person, via videoconference or by telephone conference call. Those attending by videoconference must notify the MAG site three business days prior to the meeting. Those attending by telephone conference call are requested to call (602) 261-7510 between 1:25 p.m. and 1:30 p.m. on the date of the meeting. After the prompt, please enter the meeting ID number 27822 (on your telephone key pad) followed by the pound key. If you have a problem or require assistance, dial 0 after calling the number above.

Please be advised that under procedures approved by the MAG Regional Council, all MAG committees need to have a quorum to conduct the meeting. A quorum is a simple majority of the membership. If you are unable to attend the meeting, please make arrangements for a proxy from your entity to represent you.

TENTATIVE AGENDA

	COMMITTEE ACTION REQUESTED
1. Call to Order	
2. Call to the Audience An opportunity will be provided to members of the public to address the Air Quality Technical Advisory Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Air Quality Technical Advisory Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard.	2. For information.
3. Approval of the January 11, 2007 Meeting Minutes	3. Review and approve the January 11, 2007 meeting minutes.
4. Approval of the January 19, 2007 Meeting Minutes	4. Review and approve the January 19, 2007 meeting minutes.
5. Maricopa County Public Education Campaign to Reduce Particulates in the Air Maricopa County has launched a new Public Education Campaign designed to inform the public about what they can do to reduce particulate pollution. The campaign, Bring Back Blue, contains a list of twelve actions the public can do to reduce particulate pollution. A presentation will be provided by Maricopa County.	5. For information and discussion.
6. Status of the Maricopa County 2005 PM-10 Emissions Inventory The Maricopa County Air Quality Department has been in the process of refining the Preliminary Draft 2005 PM-10 Emissions	6. For information and discussion.

Inventory. A revised inventory was made available by the County on January 23, 2007 along with the inventory documentation. A status report will be given.

7. Description of the Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter

Sierra Research, MAG consultant, is in the process of preparing descriptions of the Preliminary Draft Comprehensive List of Measures to reduce PM-10 Particulate Matter for use by the Committee in evaluating possible control measures. At this meeting, a portion of the measures will be described. The remaining measures will be described at the February 15, 2007 meeting.

In addition, the Preliminary Draft List has been revised based upon the comments made by the Committee and the recommendations made by the consultants for the PM-10 Source Attribution and Deposition Study. Please refer to the enclosed material. Additional comments and suggestions from the Committee are welcomed.

7. For information and discussion.

8. Status Report on Agricultural Measures

The Governor's Agricultural Best Management Practices Committee has been evaluating possible measures to reduce PM-10 emissions from agriculture. A status report will be given.

8. For information and discussion.

9. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for **Thursday, February 15, 2007 at 1:30 p.m.** The Chairman will invite the Committee members to suggest future agenda items.

9. For information and discussion.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Thursday, January 11, 2007
MAG Office
Phoenix, Arizona

MEMBERS PRESENT

Stephen Cleveland, City of Goodyear, Chairman
Jess Segovia for Michael Powell, Avondale
*Lucky Roberts, Buckeye
#Jim Weiss, Chandler
Jamie McCullough, El Mirage
Stephanie Prybyl for Tami Ryall, Gilbert
Doug Kukino, Glendale
#Greg Edwards for Scott Bouchie, Mesa
Gaye Knight, Phoenix
Larry Person, Scottsdale
#Antonio DeLaCruz, Surprise
Oddvar Tveit, Tempe
*Walter Bouchard, Citizen Representative
*Corey Woods, American Lung Association of Arizona
Barbara Sprungl, Salt River Project
*Brian O'Donnell, Southwest Gas Corporation
*Jim Mikula, Arizona Public Service Company
#Gina Grey, Western States Petroleum Association
Randi Alcott, Valley Metro
*Dave Berry, Arizona Motor Transport Association
Jeannette Fish, Maricopa County Farm Bureau
Russell Bowers, Arizona Rock Products Association
*Michelle Rill, Greater Phoenix Chamber of Commerce
Amanda McGennis, Associated General Contractors
Spencer Kamps for Connie Wilhelm-Garcia, Homebuilders Association of Central Arizona
*Stephen J. Andros, American Institute of Architects - Central Arizona
*Mannie Carpenter, Valley Forward
*Patrick Clay, University of Arizona - Cooperative Extension
Beverly Chenausky, Arizona Department of Transportation
Peter Hyde, Arizona Department of Environmental Quality
Wienke Tax, Environmental Protection Agency
Jo Crumbaker, Maricopa County Air Quality Department
*Duane Yantorno, Arizona Department of Weights and Measures
*Ed Stillings, Federal Highway Administration
*Judi Nelson, Arizona State University
Angela Cruz for B. Bobby Ramirez, Salt River Pima-Maricopa Indian Community
*David Rueckert, Citizen Representative

*Members neither present nor represented by proxy.
#Participated via telephone conference call.
+Participated via video conference call.

OTHERS PRESENT

Lindy Bauer, Maricopa Association of Governments
Cathy Arthur, Maricopa Association of Governments
Dean Giles, Maricopa Association of Governments
Julie Hoffman, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Ieesuck Jung, Maricopa Association of Governments
Paul Ward, Maricopa Association of Governments
Kelly Taft, Maricopa Association of Governments
Jason Stephens, Maricopa Association of Governments
Carlos Juardo, Maricopa Association of Governments
Craig Chenery, Maricopa Association of Governments
Diane Arnst, Arizona Department of Environmental Quality
Steve Peplau, Arizona Department of Environmental Quality
David Lillie, Arizona Department of Environmental Quality
Dena Konopka, Maricopa County Air Quality Department
Bob Kard, Maricopa County Air Quality Department
Johanna Kuspert, Maricopa County Air Quality Department
Holly Ward, Maricopa County Air Quality Department
Ruth Garcia, Town of Buckeye
Karen O'Regan, City of Phoenix
Tom Remes, City of Phoenix
Joe Gibbs, City of Phoenix
Brent Stoddard, City of Glendale
Robert St. John, City of Glendale
Michelle Lehman, City of Surprise
Randall Overmyer, City of Surprise
Barbara Sylvester, Brown and Caldwell
Alisa Schroder, Meritage Homes
Ben Dowler, Engle Homes
Merry Ellen Boom, Converse Consultants
Cameron Flower, Kitchell Environmental Serivces
Shane Kiesow, City of Apache Junction
Scott Di Biase, Pinal County
Bob Baxter, T & B Systems
#Bob Dulla, Sierra Research
#Colleen McKaughan, Environmental Protection Agency
#Doris Lo, Environmental Protection Agency

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on January 11, 2007. Stephen Cleveland, City of Goodyear, Chair, called the meeting to order at approximately 1:40 p.m. Greg Edwards, City of Mesa; Jim Weiss, City of Chandler; Antonio DeLaCruz, City of Surprise; Gina Grey, Western States Petroleum Association; Doris Lo, Environmental Protection Agency; Colleen McKaughan, Environmental Protection Agency; and Bob Dulla, Sierra Research, attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Cleveland stated that, according to the MAG public comment process, members of the audience who wish to speak are requested to fill out comment cards, which are available on the table adjacent to the doorway inside the meeting room. Citizens are asked not to exceed a three minute time period for their comments. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Mr. Cleveland noted that no public comment cards had been received.

3. Approval of the December 7, 2006 Meeting Minutes

The Committee reviewed the minutes from the December 7, 2006 meeting. Gaye Knight, City of Phoenix, moved and Amanda McGennis, Associated General Contractors, seconded and the motion to approve the December 7, 2006 meeting minutes carried with Larry Person, City of Scottsdale; Wienke Tax, Environmental Protection Agency; and Jess Segovia, City of Avondale, abstaining.

4. Detailed List of Phoenix Paving Unpaved Road Projects Proposed for FY 2008 CMAQ Funding

Lindy Bauer, Maricopa Association of Governments, stated that on September 28, 2006 the Committee reviewed Congestion Mitigation and Air Quality Improvement (CMAQ) projects and the proposed unpaved road projects submitted for FY 2008 and FY 2009. She mentioned that for FY 2008, the City of Phoenix submitted a project to pave three miles of unpaved roads. A detailed list for paving 2.08 miles of unpaved roads has now been provided. Ms. Bauer added that several of these projects are located in close proximity to the monitors with high PM-10 concentrations in the Salt River Area. She discussed the PM-10 problem in the region and stated that there were 27 days in 2006 where the 24-hour PM-10 standard was exceeded. The hope is to be clean in 2007, 2008, and 2009.

Ms. Knight stated that the City of Phoenix submitted a request for funding to pave three miles of unpaved roads. When the request was made, Phoenix had undertaken a process of looking at all City rights-of-way to determine if any are being used as a roadway. She stated that a few years ago the City of Phoenix paved approximately 70 miles of rights-of-way using City funding. Ms. Knight mentioned that when the request for funding was submitted, the right-of-way analysis had not been completed. In the last few months, the City has been looking at the rights-of-way near the monitors. Ms. Knight stated that the City is focusing efforts around the monitors. She stated that the ranking of proposed PM-10 paving unpaved road projects does not account for proximity to the monitors, but the Committee has been interested in that approach.

Ms. Knight stated that since the City of Phoenix was able to find projects in the Salt River Area, it is being brought back to the Committee for consideration. Currently, the City of Phoenix project is

ranked third for FY 2008 funding, which means no funding would be received. Ms. Knight indicated that the City has invested approximately $18 million over the last six years on dust control projects. She stated that the City of Phoenix is asking to be ranked first on the list to received FY 2008 funding for PM-10 paving unpaved road projects. Ms. Knight referred to pictures of roadways included in the agenda packet and indicated that they would be paved if FY 2008 funding is received. She made a motion that the City of Phoenix request to pave three miles of unpaved roads be ranked first for FY 2008 CMAQ funding for proposed PM-10 paving unpaved road projects and requested that the MAG Transportation Review Committee (TRC) support the proposed PM-10 paving unpaved road projects in FY 2008 and find funding for all of the projects. Mr. Person seconded the motion.

Randi Alcott, Valley Metro, inquired about the source of additional funding for the remaining projects. Ms. Knight replied that the Committee has had previous discussions about making paving unpaved road projects a high priority. She added that the TRC could make recommendations as to the source of funding.

Beverly Chenausky, Arizona Department of Transportation, requested that the motion be separated into two parts. Ms. Knight and Mr. Person agreed to amend the motion. Mr. Cleveland stated that the first motion would move the Phoenix project from being ranked third to first. He stated that there are four projects and that moving Phoenix to first would allow the Phoenix and the Litchfield Park projects to be fully funded with some remaining funds for the Surprise project.

Russell Bowers, Arizona Rock Products Association, asked how Surprise feels about changing the ranking. Antonio DeLaCruz, City of Surprise, responded that Surprise is against the change and feels the issue should have been mentioned earlier. He commented on having the companies that front the rights-of-way fund the paving projects.

Mr. Segovia commented on ranking the projects based on emission reductions. He mentioned the emission reductions that could be accomplished with the funding available and stated that the Surprise project should be the highest priority. Ms. Bauer responded that all of the projects submitted are good projects since dirt roads are causing a problem. She stated that the West 43rd Avenue and Durango monitors in the Salt River Area are continuing to have exceedances of the 24-hour PM-10 standard. One of the objectives is to stop violations at the monitors. Therefore, the City of Phoenix is trying to find projects that will help to reduce the concentrations at the monitors. Ms. Bauer stated that for street sweepers, jurisdictions indicate in their requests whether the sweeping will occur near a monitor. She suggested that in the future, jurisdictions submitting CMAQ projects indicate if it will be near a monitor. Ms. Bauer stated that the City of Phoenix has been working diligently in the Salt River Area.

Mr. Person asked if the emissions were recalculated after the additional detail had been provided. Ms. Bauer replied that the actual emission reductions for the Phoenix project were generically based upon the information provided in the application. She added that since that time, Phoenix has targeted unpaved roads around the monitors. Ms. Bauer stated that due to the schedule, the impacts were not recalculated. She mentioned that there is a problem at the monitors in the Salt River Area and paving these unpaved roads would help.

Ms. Chenausky asked when Phoenix would plan to pave the roads. Ms. Knight responded that the funding is for FY 2008 and paving would begin within that year. Ms. McGennis inquired if the

shoulders are included. Ms. Knight replied that is correct. Ms. McGennis commented on all projects receiving funding and keeping Phoenix ranked first.

Mr. Cleveland asked if an effort has been made to have the four jurisdictions with projects meet to share in the quality or standard of construction where the amount of money can be maximized and achieve the majority of efforts for each project. Ms. Knight replied that the City of Phoenix would be willing to have that discussion. She mentioned the costs per mile for the projects and discussed the possibility of cost savings in the Surprise project. Ms. Knight stated that all of the projects are important; however, the exceedances at the monitors need to be addressed.

Mr. DeLaCruz inquired about the impact on FY 2009 proposed PM-10 paving unpaved road projects. He asked if projects not funded in FY 2008 would be carried forward to FY 2009. Ms. Bauer responded that the TRC builds the MAG Transportation Improvement Program. Mr. Cleveland stated that the Committee could make a recommendation to the TRC that the projects be carried forward. He mentioned that the emission reductions from the FY 2008 projects would need to be compared to the FY 2009 projects.

Ms. McGennis commented that if the Phoenix project will help with the PM-10 problem in the Salt River Area, then it should be ranked first. She discussed working with the other communities that are requesting CMAQ funding.

Mr. Bowers asked if there is an estimated functional effect at the monitors. Ms. Knight referred to the MAG PM-10 Source Attribution and Deposition Study and indicated that there are a lot of sources in the Salt River Area. She added that doing everything we can will be helpful. Ms. Knight stated that some of the unpaved roads listed in the Phoenix paving unpaved roads project are close to the monitors. She mentioned that the projects ranked low since the average daily traffic counts on these roads are low; however, there is a lot of truck traffic. Ms. Knight stated that the model does not account for the dragout onto adjacent paved roads. She added that paving is one of the most effective measures in the Salt River Area.

Mr. Bowers asked if there are more than three miles that need to be paved. Ms. Knight responded that a few years ago the City of Phoenix paved 60 to 70 miles of unpaved roads. She stated that there are not a lot of unpaved roads owned by the City of Phoenix remaining in the Salt River Area. Ms. Knight added that there are private and Maricopa County unpaved roads in the area. Mr. Bowers commented that legislation is being proposed and he will discuss it under the next agenda item.

Peter Hyde, Arizona Department of Environmental Quality, indicated that he supports the motion. He commented on the need to reallocate CMAQ funding away from ITS and bicycle/pedestrian projects and toward PM-10 reduction projects.

Jeannette Fish, Maricopa County Farm Bureau, commented on things that cannot be controlled along the Salt River. She stated that paving two miles of unpaved roads in the Salt River Area can make a difference. She expressed support for the motion.

Spencer Kamps, Homebuilders Association of Central Arizona, stated that he supports the motion. He also mentioned that he concurs with earlier comments by Mr. Hyde regarding the fact that there is little funding for paving projects. Mr. Kamps indicated support for efforts to secure more funding for paving projects. He asked why the paving unpaved roads control measure is listed as a low impact for attainment at the monitors. Ms. Bauer replied that the control measure for paving or

stabilizing existing dirt roads and alleys has a high impact for the five percent reduction in emissions. Cathy Arthur, Maricopa Association of Governments, stated that the thought originally was that there would be low impact on the monitors for this control measure. However, after hearing the next agenda item, the impact may change.

Ms. McGennis commented that originally there were no dedicated roads. However, now that specific roads are identified, the impact may change. Mr. Cleveland requested that MAG staff and the jurisdictions requesting FY 2008 CMAQ funding for paving unpaved roads meet to discuss criteria/standards used for paving thickness, curb and gutter, widened shoulders, etc. He stated that discussions should occur to determine if the $2 million available for FY 2008 can reach further and result in a better use of the money.

Mr. Kamps asked if a message could be sent to the TRC saying more money should be allocated to paving unpaved road efforts in light of the PM-10 problem. Mr. Cleveland indicated that would be a separate motion.

Ms. Alcott asked for clarification between the second and possible third motions. Mr. Cleveland responded that the second motion will be restated before a third motion is made. He called for a vote on the motion that the City of Phoenix request to pave three miles of unpaved roads be ranked first for FY 2008 CMAQ funding for proposed PM-10 paving unpaved road projects. The motion passed with Mr. DeLaCruz voting no and Ms. Chenausky and Ms. Tax abstaining.

Ms. Knight stated that the second motion is the result of previous discussion. She mentioned that she would be willing to withdraw the second motion in respect of time. Ms. Tax stated that it is worth reaffirming to the TRC that the amount of funds that go toward PM-10 projects should be maximized. Mr. Cleveland asked that Mr. Kamps and Mr. Hyde work together to formulate ideas for sources to discuss at a future meeting. He asked for a vote on the motion to request that the TRC support the proposed PM-10 paving unpaved road projects in FY 2008 and find funding for all of the projects.

Ms. Alcott expressed concern for other projects that are already funded. Ms. Knight responded that the motion is for future funding. The motion passed with Mr. Segovia voting no.

5. PM-10 Source Attribution and Deposition Study

Bob Baxter, T & B Systems, provided an overview of the PM-10 Source Attribution and Deposition Study. He discussed background information for the study including the conclusions from the Salt River PM-10 State Implementation Plan and the evaluations of the Salt River PM-10 violations recorded in winter 2005. Mr. Baxter indicated that the peak values were recorded in the morning hours and coincided with high traffic periods. He mentioned that insights needed included the following: determine principal cause of modeling shortfall, determine if local sources are poorly characterized, determine significance of external sources/transport under stagnant conditions, and assess local source significance for the West 43rd Avenue and Durango Complex monitors.

Mr. Baxter mentioned the key questions to be addressed in the revised scope of work for the study and discussed the approach. The approach includes assessing existing meteorological and PM data, selecting monitoring tools, and establishing a sampling plan. Mr. Baxter stated that the sampling plan included the following: define routes for mobile sampling, determine location of meteorological data collection, select locations to investigate dispersion of roadway sources, conduct sampling in

two phases, coordinate with local agencies for related data, and perform daily review of collected data to identify insights, opportunities and problems.

Mr. Baxter provided details on the following monitoring tools: particle lidar, mobile monitoring, DustTrak optical PM-10, DustTrak optical PM-2.5, MiniVol filter based, particle size analyzer, fixed site sampling, Sodar, and SCAMPER. He mentioned that the particle lidar identified particles and wind fields transporting the particles. He stated that the mobile monitoring van was equipped so that data could be collected while in motion. In addition, a camera was mounted on the front of the vehicle so that visuals could be tied back to the particulate and meteorological data being collected. Mr. Baxter mentioned that all samples were being collected and recorded in two second intervals. He also discussed a second vehicle that was outfitted with a slightly reduced amount of equipment. Mr. Baxter stated that both vehicles included global positioning systems so that the location of the vehicles were fully documented.

Mr. Baxter indicated that a fixed site for measuring PM-10 and meteorology was added near 35th Avenue between the West 43rd Avenue and Durango monitors along the Salt River Basin. He stated that the Sodar antenna determines wind and mixing properties of the atmosphere up to 200 meters. Mr. Baxter stated that the study was coordinated with the SCAMPER paved road PM-10 data collection activities so that the data sets could be melded for a better understanding of the problem.

Mr. Baxter mentioned that the application of the monitoring tools included the following: mapping the distribution of particulate matter and identify regions of interest, characterizing the diurnal variations in PM levels, characterizing the size distribution of PM, and characterizing the meteorology during stagnation events. He provided an example mobile van map from November 15, 2006. Mr. Cleveland asked which color represents the highest concentration. Mr. Baxter replied that black is the lowest and red represents the highest concentrations. Ms. McGennis inquired about the values. Mr. Baxter responded that the values are instantaneous.

Mr. Baxter presented the conceptual model of the problem. He discussed winter versus summer, traffic schedule during morning stagnant conditions, drainage aloft through the Salt River Basin, a wide variety of significant local sources, and carryover from prior days (stagnation). Mr. Baxter provided an example of meteorological data indicating the apparent depth of the surface layer which acts as a lid in the morning. He stated that within 100 vertical feet there is a complete reversal of wind direction.

Mr. Baxter discussed field observations which occurred in two phases and included weekday and weekend sampling. He mentioned the observed exceedances at the West 43rd Avenue and Durango Complex monitors were based on preliminary data. Mr. Baxter discussed the detailed sampling that occurred on 17 days. He stated that the data is currently being validated and prepared for analysis. Mr. Baxter provided pictures and video clips of PM-10 source examples.

Mr. Bowers inquired about the direction in the picture for trackout. Mr. Baxter replied that the picture is taken from the south side of the road looking toward the northwest. Mr. Bowers asked if the concentration was measured at the location in the picture. Mr. Baxter responded that measurements of PM concentrations were not taken at that location. He provided a video clip of trackout. Mr. Bowers inquired about water. Mr. Baxter replied that some of the vehicles leaving the facility in the video clip appeared to be wet; however, there was trackout that would dry and become reentrained. Other vehicles were not wet. Ms. McGennis commented on the possibility of

the truck driving partially on the unpaved shoulder. Mr. Baxter responded that he observed the trackout and vehicles driving over the trackout.

Mr. Bowers commented on the compressed air of a vehicle that size. He inquired about the location of the facility exit, an exaggerated cloud by the nearest pole, and wheel washers at the facility. Mr. Baxter replied that the facility exit is further back and that trucks were pulling out in both directions. He stated that some of the trucks that were exiting the facility appeared to be wet.

Mr. Baxter provided video clips of dragout and unpaved shoulders along Miami Street. Ms. Knight mentioned that Miami Street is on the City of Phoenix list to pave. Ms. McGennis asked if the trucks are pulling out of a paved entrance. Mr. Baxter responded that it is all unpaved. He provided a video clip of unpaved roads and dragout where a truck pulled out in front of his vehicle. Mr. Bowers commented on the direction of the sun in the video clips. Mr. Baxter replied that the angle of the sun makes a big difference and can be deceiving in terms of PM concentrations. He mentioned the benefits of real-time monitors that record continuously.

Mr. Baxter provided a video clip of open burning adjacent to the West 43rd Avenue monitor. He showed the impact of the open burning on the PM-10 concentrations at the monitor on that day. Mr. Baxter presented video clips of an agricultural site on a High Pollution Advisory Day and pictures from the following day. He also provided pictures and clips of unpaved lots. Mr. Baxter presented the vehicle activity on unpaved lots and discussed the impact of a truck yard on the Durango Complex monitor. Mr. Kamps asked if the truck yard was paved. Ms. Arthur replied that the truck yard was likely gravel or poorly maintained asphalt.

Mr. Baxter stated that intensive monitoring on 19th Avenue usually resulted in high PM-10 concentrations. However, on a day when a van was positioned on 19th Avenue for a number of hours, it was clear the dust control operations were significantly different. The area was clean. Mr. Baxter stated that on days when their presence was unknown there were higher PM-10 concentrations.

Bob Dulla, Sierra Research, presented the control measures to be investigated. He stated that the study has determined that the PM-10 concentrations in the Salt River Area are a local control problem. Mr. Dulla mentioned that based on the field study, there are a variety of sources that need control. He discussed categories of control that were identified which are independent of the 32 measures previously mentioned. There were five categories identified: establish continuous monitoring requirements for construction projects and permitted facilities larger than 50 acres, Maricopa County purchase and operate mobile monitoring system to measure site specific values and issue notices of violation, cessation of activities during stagnant conditions, modify Maricopa County Rules 310 and 310.01, and expanded enforcement.

Ms. McGennis commented that the suggested measures are only being applied to the currently regulated sources. Mr. Dulla responded that agriculture is being addressed separately. He added that the sources are largely all regulated; however, the emissions from the sources are not being controlled.

Mr. Kamps mentioned that many of the sources in the presentation are unregulated such as dragout and vortices. He added that agriculture is an issue as well. Mr. Kamps referred to the truck yard where emissions cross the property line. He asked if the recommendation for the property line monitors would apply to private facilities. Mr. Dulla replied that is correct. He added that the key

is enforcement and structuring for effectiveness. Mr. Dulla indicated that the City of Phoenix and Maricopa County are pursing the paving of unpaved shoulders. He stated that there is a problem in the Salt River Area where paved shoulders are covered with dirt due to trackout.

Mr. Kamps commented on open burning. Mr. Dulla responded that open burning is an enforcement issue since it is already a controlled activity. Ms. McGennis commented on vacant lots. Mr. Dulla replied that enforcement of the 20 percent opacity requirement would have an impact on the observations.

Mr. Bowers commented that there was a focus on regulated sources in the presentation which does not release the sources from responsibility. He asked how to direct sufficient resources to the Salt River Area and not be focused on the monitors so that it can be accepted by the Environmental Protection Agency. Mr. Bowers commented on regulatory regimes based on emission factors. He mentioned legislation being proposed and stated that it needs to be able to be expanded across the Maricopa County PM-10 Nonattainment Area as necessary. Mr. Bowers requested that the presentation be given at an Arizona Rock Products Association environmental meeting. Ms. Arthur responded that additional presentations could be provided within the budget of the contract. She suggested various sources could meet to hear the presentation.

Mr. Hyde commented on possible legal difficulties with developing a graduated set of zones with zones closer to the monitors having more stringent regulation and enforcement. He discussed the possibility of municipalities placing more enforcement near the monitors. Mr. Hyde added that the regulations would likely have to be the same. Mr. Bowers commented on creating a zone with tax abatement incentives for dust and mitigation activity. Tax abatement incentives could be focused on any area with dust generation above a certain level. Mr. Cleveland clarified that as PM-10 concentrations reach a certain level, specific actions would be triggered. Mr. Bowers replied that is correct. Mr. Hyde commented on municipalities developing a unified enforcement program that would place more stringent and frequent enforcement at the places where it is needed most.

Jo Crumbaker, Maricopa County Air Quality Department, commented on the vacant lot situation. She stated that Maricopa County is working so that the same set of requirements apply to everyone. However, priorities are being established for which lots will be done first. Ms. Crumbaker mentioned that the requirements in the Salt River PM-10 State Implementation Plan have been completed. She commented on a series of factors regarding the structure of an enforcement program. Ms. Crumbaker discussed tax incentives as proposed by Mr. Bowers. Mr. Bowers stated that he was not suggesting tax incentives for greater enforcement. He commented on giving incentives to keep the dust down.

Ms. McGennis stated that she spoke with the enforcement supervisor in Clark County (Las Vegas, Nevada). She expressed frustration on the preliminary draft comprehensive list of measures and how many are directed toward industry. Ms. McGennis mentioned that according to the Clark County enforcement supervisor, enhancing the vacant lot and stabilization program was the control measure that provided Clark County with the most benefit. She added that the program was a struggle with stakeholders, but was needed to come into compliance.

Ms. Knight complemented T & B Systems, Sierra Research, and MAG on the study. She stated that the study focused on the Salt River Area. Ms. Knight commented on the concept of targeted enforcement. She mentioned that the Higley and Buckeye monitors are violating and that different sources would likely be the problem in those areas. Ms. Arthur mentioned the modeling being

conducted and stated that the sources at the Higley monitor are different and are being addressed. She added that the Buckeye monitor is outside the Maricopa County PM-10 Nonattainment Area and will not be addressed in the modeling.

Ms. Arthur referred to comments made by Ms. McGennis regarding Clark County. She stated that the PM-10 violations in Clark County are wind driven so the solutions may be different. Ms. Arthur referred to comments by Mr. Bowers regarding emissions versus concentrations. She mentioned that there may be some potential in looking at emission densities. Ms. Arthur stated that the Salt River Area has far more emissions that any other area. She added that the consultants for the study had mentioned that the monitors are located in the areas with the highest concentrations. Ms. Arthur thanked the Arizona Department of Environmental Quality for helping with the study.

Ms. Crumbaker mentioned that the monitor was located in the Salt River bottom because that is where the grid squares with the emissions of highest density were located. She added that PM-10 is a directly emitted pollutant and under the sampling objective in the monitoring regulations there has to be a site in the area of highest concentrations.

Ms. Fish asked how the vortices in the presentation that whipped up and then quickly settled would travel far enough to impact the monitors. Mr. Baxter replied that the large particles settle very quickly; however, the smaller particles take longer to settle. He added that as the plume moves further from the road, the peak will be the smaller particles.

Mr. Cleveland discussed the balance of the agenda. He suggested meeting again before the February 1, 2007 meeting. Mr. Cleveland indicated that MAG staff will notify the Committee of the next meeting date.

Ms. Fish asked if all-terrain vehicles (ATVs) were observed traveling in the Salt River bottom. She also asked if the lot in the pictures looking southwest of the West 43rd Avenue monitor is a Maricopa County lot. Ms. Crumbaker responded that the monitor is located on property owned by the Maricopa County Department of Transportation. She added that the lot in the pictures is a small industrial yard with a number of private entities. Mr. Baxter stated that he did witness an ATV once near the West 43rd Avenue monitor. He mentioned that the ATV was driving full speed down a paved shoulder covered in trackout. Mr. Baxter noted that no ATVs were observed in the river bottom. He stated that a visible dust plume typically has PM-10 concentrations from 700 to 800 micrograms per cubic meter.

Ms. Knight commented that the City of Phoenix spent approximately $400,000 cleaning the Salt River bed. She stated that the boundaries are continuously monitored and it has been very effective. Ms. Crumbaker mentioned that once enforcement is set up, the ATV riders move further out. She stated that further out there are standard statutory provisions that are not as strong on an enforcement basis as the cities. Ms. Fish commented on Maricopa County not being able to do what the cities can in terms of enforcement. Mr. Cleveland commented on the State of Arizona giving the counties more authority to manage these problems.

Mr. Cleveland stated that the next meeting of the Committee has been scheduled for Friday, January 19, 2007 at 10:00 a.m. He mentioned that agenda items six, seven, and eight will be forwarded to the next meeting. Ms. Bauer added that Maricopa County has a particulate public education campaign that will be unveiled soon. She asked if the County would be able to present the campaign at the next meeting. Ms. Bauer mentioned the importance of the campaign.

Mr. Kamps commented on all the information and expressed concern about the recommendations made by the consultants. He stated that the 2005 PM-10 Emissions Inventory has not been fully vetted. Mr. Kamps mentioned getting the Five Percent Plan for PM-10 done right the first time. He expressed concern about rushing to get control measures. Mr. Kamps indicated that the Committee will be looking at the control measures at the next meeting and the 2005 PM-10 Emissions Inventory has not been reviewed.

Ms. Bauer mentioned that a lot of information was provided to the Committee in the presentation. She indicated that Maricopa County is currently revising the 2005 PM-10 Emissions Inventory and MAG may need to make revisions in the projected 2007, 2008, and 2009 PM-10 Emissions Inventories based on the changes made by the County. Ms. Bauer expressed the importance of getting all the questions answered. She stated that additional meetings may be added.

Ms. Crumbaker stated that the Draft 2005 PM-10 Emissions Inventory is scheduled to be posted to the Maricopa County website on January 23, 2007. She added that the first workshop will be held January 30, 2007. Mr. Cleveland asked that MAG staff make sure that there is an orderly process and no rushing to finality.

6. Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter

This agenda item was postponed until the January 19, 2007 meeting.

7. Air Quality Modeling Approach for the Five Percent Plan for PM-10

This agenda item was postponed until the January 19, 2007 meeting.

8. Air Quality Modeling Approach for the Eight-Hour Ozone Plan for the Maricopa Nonattainment Area

This agenda item was postponed until the January 19, 2007 meeting.

9. Call for Future Agenda Items

Mr. Cleveland announced that the next meeting of the Committee is tentatively scheduled for January 19, 2007 at 10:00 a.m. With no further comments, the meeting was adjourned.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Friday, January 19, 2007
MAG Office
Phoenix, Arizona

MEMBERS PRESENT

Stephen Cleveland, City of Goodyear, Chairman
Jess Segovia for Michael Powell, Avondale
Lucky Roberts, Buckeye
*Jim Weiss, Chandler
#Jamie McCullough, El Mirage
Lisa Taraborelli for Tami Ryall, Gilbert
Doug Kukino, Glendale
#Greg Edwards for Scott Bouchie, Mesa
Gaye Knight, Phoenix
Larry Person, Scottsdale
#Antonio DeLaCruz, Surprise
Oddvar Tveit, Tempe
*Walter Bouchard, Citizen Representative
Corey Woods, American Lung Association of Arizona
Barbara Sprungl, Salt River Project
Brian O'Donnell, Southwest Gas Corporation
Mark Hayduk for Jim Mikula, Arizona Public Service Company
#Gina Grey, Western States Petroleum Association
Betsy Turner for Randi Alcott, Valley Metro
Dave Berry, Arizona Motor Transport Association
Jeannette Fish, Maricopa County Farm Bureau
Russell Bowers, Arizona Rock Products Association
*Michelle Rill, Greater Phoenix Chamber of Commerce
Amanda McGennis, Associated General Contractors
Spencer Kamps for Connie Wilhelm-Garcia, Homebuilders Association of Central Arizona
*Stephen J. Andros, American Institute of Architects - Central Arizona
Mannie Carpenter, Valley Forward
Kai Umeda for Patrick Clay, University of Arizona Cooperative Extension
Beverly Chenausky, Arizona Department of Transportation
Peter Hyde, Arizona Department of Environmental Quality
Wienke Tax, Environmental Protection Agency
Jo Crumbaker, Maricopa County Air Quality Department
Duane Yantorno, Arizona Department of Weights and Measures
*Ed Stillings, Federal Highway Administration
*Judi Nelson, Arizona State University
#Christella Armijo for B. Bobby Ramirez, Salt River Pima-Maricopa Indian Community
*David Rueckert, Citizen Representative

*Members neither present nor represented by proxy.
#Participated via telephone conference call.
+Participated via video conference call.

OTHERS PRESENT

Lindy Bauer, Maricopa Association of Governments
Cathy Arthur, Maricopa Association of Governments
Julie Hoffman, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Ieesuck Jung, Maricopa Association of Governments
Ranjith Dandanayakula, Maricopa Association of Governments
Nagesh Krishnarajanagar, Maricopa Association of Governments
Diane Arnst, Arizona Department of Environmental Quality
David Lillie, Arizona Department of Environmental Quality
Johanna Kuspert, Maricopa County Air Quality Department
Robert St. John, City of Glendale
Barbara Sylvester, Brown and Caldwell
Alisa Schroder, Meritage Homes
Merry Ellen Boom, Converse Consultants
Cameron Flower, Kitchell Environmental Services
Shane Kiesow, City of Apache Junction
Scott Di Biase, Pinal County
Andrea Martin, Arizona Department of Agriculture
Raul Torres, Arizona Department of Transportation
Kelly McMullen, Maricopa County Department of Transportation
Steve Trussell, Arizona Rock Products Association
#Colleen McKaughan, Environmental Protection Agency
#Vic Dugan, Exxon Mobil

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on January 19, 2007. Doug Kukino, City of Glendale, Acting Chair, called the meeting to order at approximately 10:10 a.m. Greg Edwards, City of Mesa; Antonio DeLaCruz, City of Surprise; Jamie McCullough, City of El Mirage; Christella Armijo, Salt River Pima-Maricopa Indian Community; Gina Grey, Western States Petroleum Association; Colleen McKaughan, Environmental Protection Agency; and Vic Dugan, Exxon Mobil, attended the meeting via telephone conference call.

2. Call to the Audience

Stephen Cleveland, City of Goodyear, Chair, stated that, according to the MAG public comment process, members of the audience who wish to speak are requested to fill out comment cards, which are available on the table adjacent to the doorway inside the meeting room. Citizens are asked not to exceed a three minute time period for their comments. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Mr. Cleveland noted that no public comment cards had been received.

3. Approval of the January 11, 2007 Meeting Minutes

Lindy Bauer, Maricopa Association of Governments, stated that since the January 11, 2007 Committee meeting occurred last week on Thursday and the mailout for this meeting occurred the next day, the meeting minutes were not available to be mailed out as part of the agenda packet. The minutes have been provided at each place. Gaye Knight, City of Phoenix, requested that action on the January 11, 2007 meeting minutes be postponed. Mr. Cleveland stated that action will be deferred until the February 1, 2007 meeting.

4. Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter

Ms. Bauer presented the Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter. She referred to the PM-10 Source Attribution and Deposition Study presentation from the January 11, 2007 Committee meeting and indicated that the consultants (T & B Systems and Sierra Research) inadvertently misspoke on agriculture. The consultants indicated that recommendations would not be given on measures for agriculture. Ms. Bauer stated that the consultants are currently preparing recommendations to help reduce agricultural emissions. The recommendations will be provided to the Governor's Agricultural Best Management Practices (BMPs) Committee for their consideration.

Ms. Bauer discussed Executive Order 2007-03, Improving Air Quality. She indicated that it is a statement by the Governor that air quality is very important for the health of the citizenry. Executive Order 2007-03 describes the particulate and ozone pollution situation in the region and provides key recommendations. Ms. Bauer stated that one requirement in Executive Order 2007-03 is that the Arizona Department of Environmental Quality (ADEQ) develop an Air Quality Improvement Action Plan with recommendations for the Governor by March 31, 2007. The ADEQ will be asked to discuss the recommendations with the Committee once the information is available.

Ms. Bauer discussed the requirements for state agencies in Executive Order 2007-03. For example, requirements will be developed by ADEQ for state funded transportation projects. These projects are already required in statute to prepare air quality impact reports. The difference is ADEQ will now prepare some requirements for these reports. Ms. Bauer stated that the reports will then be filed

with the ADEQ director for review and approval. She indicated that the Committee will be updated as Executive Order 2007-03 continues to unfold.

Ms. Knight inquired about the timing for the requirements in Executive Order 2007-03. Diane Arnst, Arizona Department of Environmental Quality, responded that a number of people have been assigned to the various elements of Executive Order 2007-03. She indicated that ADEQ is in the beginning stages and information will be provided to the Committee once it is available.

Ms. Bauer referred to the Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter. She indicated that based on the information provided by the consultants on the PM-10 Source Attribution and Deposition Study and discussion at the last Committee meeting, the impact of the measures in the unpaved roads category was changed from low to medium for attainment at the monitors. She indicated that the consultants are now describing the preliminary draft measures and the recommendations from the consultants on the PM-10 Study for the February 1, 2007 meeting. Ms. Bauer stated that the measures will also be discussed at the February 15, 2007 meeting. A recommendation for a suggested list of measures from the MAG Air Quality Technical Advisory Committee is scheduled for March 1, 2007. Currently, the Maricopa County Air Quality Department is revising the Draft 2005 PM-10 Emissions Inventory. The document will posted to the County website January 23, 2007 and a workshop will be held on January 30, 2007. Jo Crumbaker, Maricopa County Air Quality Department, clarified that the Draft 2005 PM-10 Emissions Inventory will be posted at the close of business on January 23, 2007.

Brian O'Donnell, Southwest Gas Corporation, inquired about how the preliminary draft measures and Executive Order 2007-03 are tied together. Ms. Bauer responded that the Governor's Air Quality Task Force and this Committee have worked compatibly in the past. Mr. Cleveland commented that all efforts be are part of the solution and that credit is given.

Gina Grey, Western States Petroleum Association, asked if preliminary draft measures with low impact on five percent reduction in emissions, modeling attainment demonstration, and attainment at the monitors would be removed from the list. Ms. Bauer responded that some measures have a low impact in one category and a high impact in another. Mr. Cleveland asked if Ms. Grey is referring to a specific measure. Ms. Grey mentioned preliminary draft measure number 19, update the statutes to require ultra-low sulfur diesel fuels for nonroad equipment. She commented that it is appropriately listed as low impact. Ms. Bauer replied that it is premature to remove any measures from the list. She indicated that even the low impact measures may be needed. Ms. Bauer stated that the consultants will be providing the estimated impacts of the measures on emissions.

Mannie Carpenter, Valley Forward, commented that it is important to keep the measures with low impacts on the list to show what has been considered. Colleen McKaughan, Environmental Protection Agency, mentioned that the 2005 PM-10 Emissions Inventory is not completed yet and is a crucial piece in deciding which control measures will be the most effective. She stated that it would be good to keep all the measures on the list at this time.

Ms. Bauer mentioned that the Committee has had an opportunity to review the preliminary draft measures and hear from the consultants. She stated that comments and suggestions are welcomed. Mr. Cleveland discussed control measure number one, public education and outreach (e.g., Clark County) with assistance from local governments. Dave Berry, Arizona Motor Transport Association, asked if the control measure would encompass the current particulate public education campaign. Ms. Crumbaker responded that is correct. Mr. Berry commented on the importance of public

education and outreach in Clark County and mentioned looking at possible sources of funds for this measure to expand the particulate public education campaign in Maricopa County.

Russell Bowers, Arizona Rock Products Association, inquired about the control measure having a low impact on attainment at the monitors. Ms. Bauer replied that it is difficult to quantify the impact of the measure at the monitors. She added that it is in support of strengthening compliance with the fugitive dust control rules.

Larry Person, City of Scottsdale, commented that all of the measures under the fugitive dust control rules category for five percent reduction in emissions and modeling attainment demonstration indicate increasing Rule 310 effectiveness. He asked if the consultants will state the efficiency included in the Serious Area Particulate Plan for PM-10 and provide options for increasing Rule 310 effectiveness. Ms. Bauer responded that Maricopa County has been conducting a rule effectiveness study on the fugitive dust control rules and the results are not yet available. She mentioned that the consultants will be providing the estimated impacts of the measures on emissions. Mr. Person inquired about the incremental gains on the measures that are currently being implemented. Ms. Bauer replied that the consultants will give the estimated impact on emissions above the base. Mr. Person asked if the consultants will provide options. Ms. Crumbaker responded that there will likely be some estimates; however, based on past experience, there will be a great deal of uncertainty since it deals with human behavior. She added that Maricopa County will work with the MAG consultants and provide estimates to the best of their ability.

Mr. Cleveland commented on getting information from Clark County on their experience. Cathy Arthur, Maricopa Association of Governments, stated that the consultants speak with Clark County regularly in order to quantify these measures. She indicated that when the consultants discuss the measures at the February 1, 2007 meeting, there will be a good indication of what Clark County feels was the effectiveness of these measures.

Jeannette Fish, Maricopa County Farm Bureau, referred to control measure number five, dedicated coordinator for unpaved roads and vacant lots (e.g., Clark County), and inquired about the meaning of a dedicated coordinator. Ms. Bauer responded that in Clark County, the person was a county enforcement agent that was dedicated to keeping emissions down on unpaved roads and vacant lots. Mr. Cleveland asked if a different title should be used. Ms. Knight stated that changing the title to dedicated enforcement coordinator may make it more clear.

Lisa Taraborelli, Town of Gilbert, inquired about the source of funding for the measures. Ms. Bauer replied that the source of funding is not known at this time. The consultants are currently describing the measures. Mr. Cleveland stated that historically when these measures were previously adopted, local, county, and state funds were used. He indicated that the measures will be given to the jurisdictions for consideration and each jurisdiction will then determine commitments.

Ms. Taraborelli referred to control measure number four, dust managers required at construction sites of 50 acres and greater (e.g., Clark County), and asked if the dust managers would be provided by the construction industry. Ms. Bauer replied that in Clark County, it is a county requirement and the dust managers are provided by the construction industry at the sites. Amanda McGennis, Associated General Contractors, stated that they have taken the position at this time that a dust manager does not have to be a dedicated full-time person on the site.

Mr. Berry commented on the potential implementing entities for the measures and mentioned that businesses will face the same challenges as government in trying to find funding. He stated that it is part of the process and the end is always reached. Mr. Cleveland asked for clarification on the potential implementing entities. Ms. Bauer responded that there is variety in the column for potential implementing entity and referred to the control measure requiring dust managers at construction sites of 50 acres and greater. For this measure, Maricopa County would develop the requirement and the private sector would comply.

Mr. Cleveland commented on businesses conducting self-enforcement. Mr. Bowers stated that the effectiveness of the fugitive dust control rules have to be quantifiable, which is a weakness to date. Mr. Bowers mentioned the PM-10 exceedances over the past two years. He indicated that all measures have an effect that needs to be quantified. Ms. Bauer stated that the measures in a plan need to be implemented and enforced. She mentioned that there appears to be enforcement and compliance problems based on the PM-10 Source Attribution and Deposition Study presentation at the January 11, 2007 meeting. Ms. Bauer indicated that Clark County has a good compliance rate and that much was learned from the Clark County Dust Control Program Workshop.

Mr. Cleveland discussed preliminary draft measure number six, strengthen trackout provisions. Ms. McGennis stated that she will continue to advocate for the length for rapid cleanup of trackout to remain at 50 feet cumulative from all exits, which is in the current rule. Spencer Kamps, Homebuilders Association of Central Arizona, stated that reducing the length to 25 cumulative feet is an unreasonable threshold, especially since a trackout device is required. Mr. Kamps commented that trackout is not controlled fairly on everyone. Mr. Cleveland asked if the consultants should consider all parties being universally responsible for this provision. Mr. Kamps indicated he would be happy with that; however, enforcement may be an issue. Mr. Cleveland stated that the purpose is to put all the information on the table and for MAG staff to take the comments and help the consultants do the best job possible.

Ms. Crumbaker stated that she is not opposed to all parties being responsible for the provision to clean up trackout greater than a certain threshold; however, there are resource issues. She mentioned that this would require the cities to join with Maricopa County in applying the provision in areas beyond where it is currently applied. Ms. Knight commented that she does not believe it is possible for Maricopa County to adopt rules for the cities to enforce. She added that County rules need to be consistent throughout the County and more resources should be secured if necessary. Ms. Knight indicated that having the cities adopt ordinances since Maricopa County is unable to hire more staff is not the solution. Ms. Crumbaker stated that the measure is related to city planning and zoning decisions and there are resource issues.

Ms. Knight indicated that she concurred with Mr. Kamps that the provision to reduce trackout length that requires rapid cleanup to 25 cumulative feet is an extreme proposal. She suggested amending the provision to just say increase the stringency of trackout requirements and work out the details later. Ms. Bauer stated that 25 feet cumulative from all exits is listed just as an example.

Ms. McGennis commented that a traffic control permit is required to stop traffic to clean up trackout. She stated that the permit can take two to three days yet trackout needs to be cleaned up immediately. Ms. McGennis discussed requirements for complying with the rules.

Mr. Cleveland discussed preliminary draft measure number seven, increase fines for dust control violations and continue to publish the list of violators. Mr. Bowers commented that Maricopa

County has reported an increase in fines; however, there have been more PM-10 exceedances. Ms. Bauer responded that Maricopa County has indicated that in some instances businesses treat the fines as a cost of doing business. Ms. Crumbaker stated that she would characterize that as anecdotal from some of the people involved in settlement negotiations. She mentioned that many of the cases within the last year were backlogged to the period when there was a boom in construction. Ms. Crumbaker added that there are many factors in the noncompliance issues.

Mr. Kamps commented that any statements made that the homebuilding industry looks at fines as a cost of doing business are not correct. He stated that the fines are now increasing. Mr. Kamps referred to the backlog issue and mentioned that the reason many notices of violation have been enforced from 2005 and 2006 is because the Maricopa County attorney who handled the cases felt they were not defendable in a court of law. The Maricopa County Air Quality Department took enforcement once they received the cases. Mr. Kamps referred to accusations from the County due to hiring former inspectors and environmental quality managers. He stated that increasing fines is failed strategy and he would oppose the measure strongly.

Mr. Cleveland discussed preliminary draft measure number eight, establish a certification program for Dust Free Development to serve as an industry standard, and number nine, better defined tarping requirements in Rule 310 to include enclosure of the bed. Corey Woods, American Lung Association of Arizona, referred back to measure number seven and inquired about alternatives to increasing fines. Mr. Kamps mentioned the cost of dust control efforts in the homebuilding industry. He stated that the region is still not in attainment with increased notices of violation and fines. Mr. Kamps stated that there are a number of contributors that are unregulated or lack enforcement. Ms. Fish commented that if the measure for increasing fines is left in, that any fines be for actual violations, not paperwork violations.

Ms. McGennis stated that Clark County became more effective when working with the people as the problems were occurring versus citing off-site and sending a letter a week later. She added that it was proven in Clark County that increasing fines does not fix the problem.

Mr. Kukino asked if there are chronic violators where increasing fines would be appropriate. Ms. Crumbaker replied that there is a small group in every industry that are chronically in noncompliance. She stated that another challenge is training employees to devote attention to get consistent application of the controls. Mr. Kamps stated that based on County policy, fines increase for repeat violators. Mr. Kukino commented on finding ways to get better compliance. Mr. Kamps responded that increasing fines and penalties to make industry aware of Rule 310 has already happened and will provide no benefit. Mr. Person mentioned that municipalities also build and are subject to the same rules. He stated that contractors respond differently to shutting down the site, education, and increased fines. He asked that all options be left on the table and stated that increased fines may get at some of the chronic violators.

Mr. Cleveland discussed preliminary control measure number ten, implement Rule 316. He asked if the word implement is accurate. Ms. Crumbaker replied that some revisions to the rule have been stayed and negotiations are taking place. Mr. Bowers commented that four of the methods have been stayed with the rest in effect. He suggested changing the language to say fully implement Rule 316.

Mr. Cleveland discussed preliminary control measure number eleven, require private companies to use PM-10 certified street sweepers or water filtration system sweepers on paved areas including

parking lots (e.g., Clark County). Mr. Bowers inquired about how rapidly a sufficient number of street sweepers could be secured to take care of all the needs.

Mr. Cleveland discussed preliminary control measure number twelve, shifting hours of operation during stagnant conditions in November through February. Mr. Bowers stated that a meeting was recently held where variations to work schedules was discussed. He commented on street improvement projects that must be completed during the day or night and discussed rock delivery. Mr. Bowers mentioned that certain discussions cannot occur due to antitrust implications.

Peter Hyde, Arizona Department of Environmental Quality, commented on the great potential of the measure in the Salt River Area. He stated that it is up to industry to be able to set prime emission producing activities back approximately three hours during the winter inversion period, which could be conducted on an event or routine basis. Mr. Hyde encouraged industry to consider the measure. Mr. Cleveland requested that a dialogue occur between ADEQ and industry.

Mr. Bowers commented on his industry providing a major solution by shifting work hours; however, they are only a small percentage in the Draft 2005 PM-10 Emissions Inventory. He indicated that he will work with ADEQ and stated that the government sector which buys the rock may want to be involved in the discussion. Mr. Hyde stated that it has not been thought through as to what emission categories would be amenable to this measure. He mentioned that as an illustration, the rock product facilities in the Salt River Area have an effect on the PM-10 monitors. Mr. Hyde indicated that as a model, it would make sense to begin discussions with Arizona Rock Products Association since the parts being delivered determine the work schedules for other emission producing activities. Mr. Bowers commented on the impact on industry and the ability to compete in the market.

Mr. Berry asked what three hours should be avoided. Mr. Hyde responded 5:00 a.m. to 8:00 a.m. Mr. Berry commented on the contributors in the Salt River Area and mentioned the inversion. He asked if the shift in hours would be only during stagnant conditions. Mr. Hyde replied that it could be done on an event or routine basis; however, the benefit would occur under stagnant conditions. Mr. Berry discussed the challenges of shifting hours.

Mr. Kamps commented on the mechanics issue with shifting hours of operation and the economic impact. He indicated that the measure controls the dust more efficiently on the sources already controlled so the unregulated sources can continue to emit during peak hours. He stated that there will not be attainment at the monitors until a comprehensive control list that deals with all sources is adopted. Mr. Cleveland asked MAG staff to identify the unregulated parties that should be included in the greater picture so everyone has a greater appreciation. He commented on government considering their schedules of employment during certain periods and encouraged creativity.

Mr. Cleveland discussed preliminary control measures for nonroad activities. Mr. Kamps referred to measure number 15, discourage use of leaf blowers on high pollution advisory days, and suggested banning leaf blowers or at a minimum banning gas powered leaf blowers.

Mr. Bowers inquired about the regulation on all-terrain vehicles (ATVs) on all types of property. He mentioned legislation that would allow for the impoundment and confiscation of ATVs for repeat violators in the Maricopa County PM-10 Nonattainment Area.

Mr. Cleveland discussed preliminary control measures for paving roads. He referred to measure number 22, pave or overlay with rubberized asphalt and inquired about PM-10 reductions. Ms.

McGennis suggested that the measure not specify rubberized asphalt. Mr. Cleveland mentioned an analysis that concluded rubberized asphalt increases elasticity and results in reduced degradation of the pavement. Mr. Berry inquired about what is being paved or overlaid.

Beverly Chenausky, Arizona Department of Transportation, referred to the Arizona State University (ASU) Urban Heat Island Study which looks at tire wear entrainment. She indicated that it is a small portion and the consultants will be preparing a cost/benefit analysis. Ms. Chenausky added that ASU is looking at reentrained road dust on different paving structures; however, data is not available at this time. Mr. Berry commented on better fuel economy on concrete roads. Ms. Chenausky indicated that the issue was discussed in the Governor's Climate Change Advisory Group for reducing greenhouse gas emissions. She commented on work by jurisdictions that is not clearly looked at in the benefits, such as night construction. Mr. Berry inquired about what is being paved or overlaid. Mr. Cleveland requested that MAG staff clarify the measure.

Ms. McGennis commented on removing the word rubberized. She stated that there is more that can be done using an overall paving strategy. Ms. Knight indicated that for a city, the measure is to use rubberized asphalt over a paved road and determine if there is a benefit over regular asphalt. Mr. Person added that the measure would not require rubberized asphalt everywhere. The point is to get any emission reduction credit for using rubberized asphalt.

Mr. Bowers referred to measure number 21, retrofit onroad diesel engines, and asked if the measure is an attempt to get credit for continued work in phasing out pre-1988 engines and switching to low sulfur diesel. Ms. Bauer responded that is correct. Mr. Berry commented on the measure referring to diesel particulate filters. Mr. Cleveland suggested determining the benefit for retrofit nonroad diesels with diesel particulate filters.

Mr. Cleveland discussed the preliminary control measure for unpaved parking lots. Ms. Fish asked if the measure is already included in Rule 310. Ms. Knight replied that Phoenix requires paving for unpaved parking lots and the County requires gravel. Ms. Crumbaker added that the County is not specific to the surface. Ms. Fish asked if stabilize would include gravel. Mr. Kamps asked about the requirements of Rule 310. Ms. Crumbaker responded that this is more of an issue with Rule 310.01 and discussed the requirements. Mr. Kamps inquired about enforcement. Ms. Crumbaker replied that the County is currently enforcing vacant lots, and parking lots when a complaint is received. Mr. Kamps inquired about those who fail to respond. Ms. Crumbaker responded that the process is to send out a letter to contact Maricopa County and indicate what will be done about the identified problem. She stated that the point of a failed response has not occurred. Other challenges are trespass related. Mr. Kamps recommended that the measure be strengthened to allow for enforcement action against people with unpaved parking lots who fail to stabilize.

Ms. Bauer asked if Maricopa County can take enforcement action on unpaved parking lots. Ms. Crumbaker replied that it is the same enforcement action that would occur on a vacant lot. She discussed resource issues. Mr. Kamps commented on unpaved parking lots and vacant lots being a problem at the monitors. He discussed the leniency for unpaved parking lots and vacant lots and the need for a strong enforcement program.

Mr. Bowers discussed having different enforcement during stagnant conditions in November through February. He commented on the County sending letters allowing 60 days to respond. Mr. Bowers inquired about more immediate responses so issues are resolved in the critical time frame. Mr. Cleveland asked MAG staff to look at the issue.

Mr. Cleveland discussed preliminary control measures for unpaved roads. Mr. Bowers asked if lot split access points must be stabilized. He added that may be an area to enforce or increase. Ms. Knight asked for clarification on measure number 26, prohibit new dirt roads including those associated with lot splits. Mr. Cleveland requested that Ms. Knight work with Ms. Crumbaker on the wording of the measure.

Mr. Cleveland discussed the preliminary control measure for unpaved shoulders. Ms. Chenausky stated that the measure is included in other plans and inquired about the improvements. Ms. Knight discussed commitments in prior plans. She stated that it is helpful to have the measure listed in a new plan so the cities can indicate what has been and will be done. Ms. Chenausky asked if it will be included in the baseline. Ms. Knight replied that shoulders being paved this year would not be included in the baseline.

Mr. Cleveland discussed preliminary control measures for unpaved access points and vacant lots. Ms. Crumbaker commented on funding for stabilization in measure 32, vacant lots stabilized by County if owners do not respond, liens put on property if necessary (e.g., Clark County). Mr. Cleveland suggested that the lien go with the land and not expire as state law currently has in place.

Mr. Hyde presented four new control measures: just-in-time grading, park and ride lots being built earlier, schedule improvements on parallel streets to retain alternative route options along major north/south and east/west corridors, and coordinate public transit services closely with Pinal County. He stated that just-in-time grading has worked well in Bullhead City. The idea is that once a parcel of land above a certain size is cleared, stabilization or work on the parcel is required within a certain number of days.

Ms. Crumbaker commented that over the holidays, PM-2.5 was extremely high due to residential wood burning. She mentioned closing loopholes such as outdoor fireplaces and pits and ambiance fireplaces in the hospitality industry. Ms. Crumbaker indicated that the fine for open burning is $25, which does not provide much deterrence. There may be more measures that can be considered for open burning.

Mr. Cleveland stated that the intent of the Committee is to look holistically and not singling out particular parties. All the parties contributing to the PM-10 problem need to be involved in the process. Mr. Kamps asked if the Preliminary Draft Comprehensive List of Measures to Reduce PM-10 Particulate Matter are the only measures being evaluated. Ms. Bauer responded that the recommendations from the consultants will be included in the list of measures to be considered by the Committee.

Mr. Bower referred to the PM-10 Source Attribution and Deposition Study presentation given at the last meeting. He indicated that dust cannot be measured by using light. Mr. Bowers added that opacity gauging is subjective. He mentioned that the presentation showed video clips with backlit dust and dust in the street lights at night. Ms. Knight stated that dust plumes do look overly dramatic; however, the study included collecting PM-10 concentrations as the mobile vehicle drove through a dust plume. Mr. Bowers said that the method expressed in the presentation was visual.

Ms. Bauer stated that the consultants will have a report describing the preliminary draft measures for the February 1, 2007 meeting, and the measures will also be discussed at the February 15, 2007 meeting. Ms. Arthur mentioned that the control measures will be evaluated using the models to be described in the next agenda item. The control measures that will be committed to in June will be

tested by the modeling processes in order to show attainment. She indicated that modeling is one piece of a plan. The Five Percent Plan for PM-10 requires attainment at the monitors, modeling attainment demonstration, and five percent reduction per year in emissions.

5. Air Quality Modeling Approach for the Five Percent Plan for PM-10

Ms. Arthur presented the air quality modeling approach for the Five Percent Plan for PM-10. She provided a map of the Maricopa County PM-10 Nonattainment Area and discussed the PM-10 monitoring data. Ms. Arthur mentioned the requirements for the Five Percent Plan for PM-10 and provided the preliminary 2007 PM-10 emissions without windblown dust. She indicated that the PM-10 modeling approach has been coordinated with the MAG Air Quality Planning Team and EPA. Ms. Arthur discussed the AERMOD Dispersion Model, which will be used in the Salt River Area. She stated that the model will simulate concentrations at lower wind speeds. Ms. Arthur also discussed the Proportional Rollback Model that will be used to model a high wind event at the Higley monitor. She added that Sierra Research and T & B Systems are assisting with PM-10 modeling and assumptions. Ms. Arthur stated that the hope is to demonstrate attainment by 2009. She provided a schedule for the Five Percent Plan for PM-10.

6. Air Quality Modeling Approach for the Eight-Hour Ozone Plan for the Maricopa Nonattainment Area

Ms. Arthur presented the air quality modeling approach for the Eight-Hour Ozone Plan for the Maricopa Nonattainment Area. She indicated that the region has been classified as a Basic Nonattainment Area under Subpart 1 of the Clean Air Act; however, a federal appeals court has vacated the EPA Final Rule to Implement the 8-Hour National Air Quality Standard - Phase 1. Ms. Arthur stated that MAG is proceeding under the assumption that the plan is required. She provided the eight-hour ozone nonattainment area classifications nationwide. Ms. Arthur mentioned that there have been discussions with Clark County regarding eight-hour ozone modeling since Las Vegas, Nevada is also a Basic Nonattainment Area.

Ms. Arthur provided a map of the Maricopa Eight-Hour Ozone Nonattainment Area and discussed the eight-hour ozone monitoring data. She noted that there have been no violations of the eight-hour ozone standard in the last two years. Ms. Arthur discussed the attainment demonstration for eight-hour ozone. She presented the 2006 regional volatile organic compound (VOC) and nitrogen oxide (NOx) emissions with committed control measures and 2015 VOC and NOx emission reductions from the One-Hour Ozone Maintenance Plan. Ms. Arthur indicated that region should be able to show attainment with no new control measures.

Ms. Arthur provided details on the eight-hour ozone modeling. She discussed the MM5 meteorological model and CAMx photochemical dispersion model. Ms. Arthur added that the CMAQ model may also be applied to validate CAMx results. She mentioned that three worst case ozone episodes are being modeled. Ms. Arthur provided the committed measures in the One-Hour Ozone Maintenance Plan that will be modeled. She discussed the status of eight-hour ozone modeling and indicated that attainment is expected in 2008. Ms. Arthur added that the modeling incorporates the MAG Biogenics Study results and assistance is being provided by ENVIRON. She stated that there will be weight of evidence documentation to support the modeling. Ms. Arthur provided the MAG Air Quality Modeling Chain and nested CAMx and MM5 modeling domains.

Ms. Arthur discussed the NOx exemption. The region had a NOx waiver under the one-hour ozone standard, which went away when the standard was revoked. She indicated that modeling must prove that a NOx exemption is warranted for the eight-hour ozone standard. Based on preliminary modeling, decreases in NOx in 2008, in general, increases ozone in the urbanized area.

Mr. O'Donnell commented that a NOx exemption should be given to all stationary sources, not just power plants. Ms. Crumbaker replied that the NOx exemption is tied to when reasonable available control technology (RACT) is required in a nonattainment area. For NOx, control technique guidance documents were not done; therefore, RACT would be for only major sources. She stated that the source category for a rule would be primarily power plants. Ms. Crumbaker mentioned rules on dirty engines and cautioned that the brown cloud and haze in the region are NOx related. Mr. O'Donnell commented that if a NOx exemption is necessary, all sources should be included. Ms. Arthur mentioned consistency with the Clean Air Act.

Ms. Arthur provided the results of the first test for a NOx exemption, which involved reducing anthropogenic VOC by 40 percent and determining the impact on ozone. In this case, ozone decreased throughout the modeling area. Ms. Arthur provided the results of the second test for a NOx exemption, reducing anthropogenic NOx by 40 percent. She noted the difference between the two tests. In this case, ozone is increasing in the urbanized area. The third test is reducing both anthropogenic VOC and NOx by 40 percent. She noted that the results were similar to reducing just NOx. Ms. Arthur discussed how decreases in NOx emissions increase ozone. She stated that nitrogen oxides can either promote or inhibit ozone formation and high NOx emissions, relative to VOCs, can strongly inhibit ozone formation. Ms. Arthur presented the ozone isopleth plot (EKMA diagram) and the schedule for the Eight-Hour Ozone Plan.

Mr. Hyde commented that if the modeling shows attainment will be reached with the existing measures in 2008, that the Committee consider the applicability of a NOx waiver. He commented on visibility and not wanting more NOx emissions. Mr. Hyde indicated that there is more than just ozone and discussed the PM-2.5 concentrations over the holidays that were in part nitrates.

Ms. Arnst commented that it was her understanding that the one-hour ozone standard was attained because of reformulated gasoline. She expressed caution about the modeling versus what is shown at the monitors. Ms. Arthur replied that MAG modeling for the one-hour ozone standard demonstrated attainment in 1996. She added that the region actually attained the standard at the monitors in 1997. Ms. Arthur mentioned that the models being used now are better than the those used by MAG in the early 1990s. She stated that there has been a lot of communication with the consultants and EPA on the modeling.

7. Call for Future Agenda Items

Mr. Cleveland announced that the next meeting of the Committee is tentatively scheduled for February 1, 2007. With no further comments, the meeting was adjourned.

Agenda Item #7

PRELIMINARY DRAFT COMPREHENSIVE LIST OF MEASURES TO REDUCE PM-10 PARTICULATE MATTER

January 25, 2007

January 25, 2007

PRELIMINARY DRAFT COMPREHENSIVE LIST OF MEASURES TO REDUCE PM-10 PARTICULATE MATTER

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
Agriculture The Governor's Agricultural Best Management Practices Committee is in the process of evaluating potential measures to further reduce PM-10 emissions from agriculture for consideration for the Five Percent Plan for PM-10. This Committee was established by law in 1998 (Arizona Revised Statutes, Title 49-457) to develop an agricultural PM-10 general permit that would address the need for controls on agricultural operations. The potential agricultural measures will be presented to the MAG Air Quality Technical Advisory Committee for consideration.				
Fugitive Dust Control Rules				
1. Public education and outreach (e.g., Clark County) with assistance from local governments	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	L	County, local govts
2. Extensive Dust Control Training Program (e.g., Clark County)	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	M	County, private sector
3. Core Dust Control Training Program with video provided to local governments and private sector	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	M	County, local govts, private sector
4. Dust Managers required at construction sites of 50 acres and greater (e.g., Clark County)	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	M	County
5. Dedicated **enforcement** coordinator for unpaved roads and vacant lots (e.g., Clark County)	H (increasing Rule 310.01 effectiveness)	H (increasing Rule 310.01 effectiveness)	M	County
6. Strengthen **the stringency and enforcement of the** trackout provisions ~~- reduce length that requires rapid cleanup (e.g., 25 feet cumulative from all exits)~~ ~~- increase size of gravel pad~~ ~~- require grizzly and gravel pad~~	H (increasing Rule 310 & 310.01 effectiveness)	H (increasing Rule 310 & 310.01 effectiveness)	H	County

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
7. Increase fines for dust control violations and continue to publish the list of violators	H (increasing Rule 310 & 310.01 compliance)	H (increasing Rule 310 & 310.01 compliance)	H	County
8. Establish a certification program for Dust Free Developments to serve as an industry standard	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	L	State, County
9. Better defined tarping requirements in Rule 310 to include enclosure of the bed	H (increasing Rule 310 effectiveness)	H (increasing Rule 310 effectiveness)	M	County
10. Conduct just-in-time grading (i.e., once a parcel of land is cleared, stabilization or work on the parcel would be required within a certain number of days)	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**M**	**County**
11. Establish continuous monitoring requirements for permitted sources larger than 50 acres	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
12. Conduct mobile monitoring to measure PM-10 and issue NOVs	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
13. Cease dust generation activities during stagnant conditions	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
14. Establish maintenance requirements for paved roads and parking lots	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
15. Conduct nighttime inspections	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
16. Increase inspection frequency for permitted facilities	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
17. Increase number of proactive inspections in areas of highest PM-10 emissions densities - intensify training and education - incentive program for compliance	**H (increasing Rule 310 effectiveness)**	**H (increasing Rule 310 effectiveness)**	**H**	**County**
18. Notify violators more rapidly to promote immediate compliance	**L**	**L**	**H**	**County**
Industry				
19. **Fully** implement Rule 316	L	L	H	County, private sector
20. Require private companies to use PM-10 certified street sweepers on paved areas including parking lots (e.g., Clark County)	L	L	H	State
21. Shift hours of operation during stagnant conditions in November through February	N/A	H	H	State
22. Model cumulative impacts for new or modified existing sources	L	L	M	State
23. Conduct night time and weekend inspections	L	M	M	County
Nonroad Activities				
24. **Ban or** discourage use of leaf blowers on high pollution advisory days	L	L	L	State, County
25. Encourage use of leaf vacuums to replace blowers	L	L	L	State, County

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
26. Reduce off-road vehicle use in areas with high off-road vehicle activity (e.g., Goodyear Ordinance) **- impoundment or confiscation of vehicles for repeat violators**	M	L	L	State, County, local govts
27. Create a fund to provide incentives to retrofit nonroad diesel engines and encourage early replacements with advanced technologies	L	L	L	State
28. Update the statutes to require ultra-low sulfur diesel fuels for nonroad equipment	L	L	L	State
Paved Roads				
29. Sweep streets with PM-10 certified street sweepers	M	M	M	County, local govts
30. Retrofit onroad diesel engines with particulate filters	L	L	L	State, County, local govts
31. **Re**pave or overlay **paved roads** with rubberized asphalt	L	L	L	State, County, local govts
Unpaved Parking Lots				
32. Pave or stabilize existing unpaved parking lots (e.g., **upgrade to** Phoenix Parking Code) **- strengthen enforcement**	M	M	M	County, local govts
Unpaved Roads				
33. Pave or stabilize existing dirt roads and alleys	H	**M**	M	County, local govts
34 Limit speeds to 15 miles per hour on high traffic dirt roads	H	**M**	M	County, local govts

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
35. Prohibit new dirt roads including those associated with lot splits	N/A	N/A	M	State, County
Unpaved Shoulders				
36. Pave or stabilize unpaved shoulders	H	M	M	County, local govts
Unpaved Access Points				
37. Pave or stabilize unpaved access to paved roads	M	M	M	County, local govts
Vacant Lots				
38. Strengthen and increase enforcement of Rule 310.01 for vacant lots	H (increasing Rule 310.01 effectiveness)	L	M	County
39. Restrict vehicular use and parking on vacant lots (e.g., Phoenix)	H (increasing Rule 310.01 effectiveness)	L	M	County, local govts
40. Enhanced enforcement of trespass ordinances and codes	H (increasing Rule 310.01 effectiveness)	L	M	County, local govts
41. Vacant lots stabilized by County if owners do not respond, liens put on property if necessary (e.g., Clark County)	H (increasing Rule 310.01 effectiveness)	H	M	State, County
Traffic Flow Improvements				
42. Schedule improvements on parallel streets to retain alternate route options along major north/south and east/west corridors	**L**	**L**	**L**	**Local govts**
Transit				
43. Build park and ride lots earlier	**L**	**L**	**L**	**Local govts**

MEASURE	FIVE PERCENT REDUCTION IN EMISSIONS	MODELING ATTAINMENT DEMONSTRATION	ATTAINMENT AT THE MONITORS	POTENTIAL IMPLEMENTING ENTITY
44. Coordinate public transit services with Pinal County	**L**	**L**	**L**	**Local govts**
Woodburning				
45. Increase fines for open burning (currently $25)	**L**	**L**	**H**	**County**
46. Restrict use of outdoor fireplaces and pits and ambience fireplaces in the hospitality industry	**L**	**L**	**H**	**County**

Note: Low, medium, and high rankings are preliminary qualitative assessments and will be revised as the emissions inventory and modeling data become available.