



**MARICOPA
ASSOCIATION of
GOVERNMENTS**

302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-8300 ▲ FAX (602) 254-6490
E-mail: mag@mag.maricopa.gov ▲ Web site: www.mag.maricopa.gov

October 19, 2006

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, October 26, 2006 - 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.

A Voluntary Association of Local Governments in Maricopa County

City of Apache Junction ▲ City of Avondale ▲ Town of Buckeye ▲ Town of Carefree ▲ Town of Cave Creek ▲ City of Chandler ▲ City of El Mirage ▲ Fort McDowell Yavapai Nation ▲ Town of Fountain Hills ▲ Town of Gila Bend
Gila River Indian Community ▲ Town of Gilbert ▲ City of Glendale ▲ City of Goodyear ▲ Town of Guadalupe ▲ City of Litchfield Park ▲ Maricopa County ▲ City of Mesa ▲ Town of Paradise Valley ▲ City of Peoria ▲ City of Phoenix
Town of Queen Creek ▲ Salt River Pima-Maricopa Indian Community ▲ City of Scottsdale ▲ City of Surprise ▲ City of Tempe ▲ City of Tolleson ▲ Town of Wickenburg ▲ Town of Youngtown ▲ Arizona Department of Transportation

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 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.

3. Approval of the September 28, 2006 Meeting Minutes

4. CMAQ Project Evaluation Process

At the September meeting, the MAG Air Quality Technical Advisory Committee reviewed the evaluation of proposed projects for Congestion Mitigation and Air Quality Improvement funds. According to federal guidance, the primary purpose of the CMAQ program is to fund transportation projects and programs in nonattainment and maintenance areas which reduce transportation-related emissions. For PM-10, the guidance provides examples of eligible projects which include paving dirt roads, diesel bus replacements, and purchasing more effective street sweeping equipment.

2. For information.

3. Review and approve the September 28, 2006 meeting minutes.

4. For information, discussion and possible action.

One of the recommendations made by the Committee at the last meeting was that the MAG Transportation Policy Committee should allocate more funds in the Transportation Improvement Program to air quality projects that address the dust problem and invite more air quality projects to be submitted from the community. The PM-10 particulate pollution problem poses a major challenge for this region.

At this meeting, additional information will be presented on how a recommendation from the Air Quality Technical Advisory Committee on CMAQ projects moves forward and is considered. This will include the committee structure for evaluating CMAQ projects and the funding allocations in the Regional Transportation Plan approved by the voters. Please refer to the enclosed material.

5. Dust Suppressant Information

Dust suppressants are often effective methods in reducing PM-10 emissions from various sources. A representative from the Associated General Contractors will give a presentation on a case study of a dust suppressant used in the Salt River area.

6. MAG Biogenics Study

The MAG Biogenics Study is designed to develop a state-of-the-art biogenics modeling system for the Maricopa County eight-hour ozone nonattainment area. The project involved an evaluation and assessment of existing models, land use databases, and emission factors. It also included a field study to collect the necessary data for the development of biogenic emission factors specifically for vegetation species found across the study region. The study has been completed and a presentation will be given.

5. For information and discussion.

6. For information and discussion.

7. New Particulate Pollution Standards

On September 21, 2006, the Environmental Protection Agency issued the Final Revisions to the National Ambient Air Quality Standards for Particle Pollution (Particulate Matter). In summary, the Environmental Protection Agency retained the 24-hour PM-10 standard, revoked the annual PM-10 standard, lowered the 24-hour PM-2.5 standard to 35 ug/m³, and retained the annual PM-2.5 standard.

Since the region violates the 24-hour PM-10 standard, the Five Percent Plan for PM-10 is still required. Currently, the region does not violate the PM-2.5 standards. Please refer to the enclosed material.

8. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for **Thursday, November 30, 2006 at 1:30 p.m.** The Chairman will invite the Committee members to suggest future agenda items.

7. For information and discussion.

8. For information and discussion.

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

Thursday, September 28, 2006
MAG Office
Phoenix, Arizona

MEMBERS PRESENT

*Stephen Cleveland, City of Goodyear, Chairman	Amanda McGennis, Associated General Contractors
#Michael Powell, Avondale	*Connie Wilhelm-Garcia, Homebuilders Association of Central Arizona
Lucky Roberts, Buckeye	*Stephen J. Andros, American Institute of Architects - Central Arizona
*Jim Weiss, Chandler	Mannie Carpenter, Valley Forward
*Jamie McCullough, El Mirage	Patrick Clay, University of Arizona - Cooperative Extension
Greg Svelund for Tami Ryall, Gilbert	*Beverly Chenausky, Arizona Department of Transportation
Doug Kukino, Glendale	Peter Hyde, Arizona Department of Environmental Quality
#Scott Bouchie, Mesa	Wienke Tax, Environmental Protection Agency
Gaye Knight, Phoenix	Jo Crumbaker, Maricopa County Air Quality Department
Larry Person, Scottsdale	*Duane Yantorno, Arizona Department of Weights and Measures
Antonio DeLaCruz, Surprise	Ed Stillings, Federal Highway Administration
Oddvar Tveit, Tempe	Judi Nelson, Arizona State University
*Walter Bouchard, Citizen Representative	*B. Bobby Ramirez, Salt River Pima-Maricopa Indian Community
Corey Woods for Bill Pfeifer, American Lung Association of Arizona	*David Rueckert, Citizen Representative
*Sunil Varma, Salt River Project	
Brian O'Donnell, Southwest Gas Corporation	
*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	

*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	Wayne Anderson, Town of Cave Creek
Cathy Arthur, Maricopa Association of Governments	Souren Naradikian, Town of Cave Creek
Dean Giles, Maricopa Association of Governments	Robert St. John, City of Glendale
Julie Hoffman, Maricopa Association of Governments	Sonny Culbreth, City of Litchfield Park
Paul Ward, Maricopa Association of Governments	Paul Gilmore, W.C. Scoutten/City of Litchfield Park
Ranjith Dandanayakula, Maricopa Association of Governments	Scott Di Biase, Pinal County
	Diane Arnst, Arizona Department of Environmental Quality
	Jody Noble, Environmental Stabilization Solutions

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on September 28, 2006. Gaye Knight, City of Phoenix, Acting Chair, called the meeting to order at approximately 1:40 p.m. Scott Bouchie, City of Mesa, and Michael Powell, City of Avondale, attended the meeting via telephone conference call.

2. Call to the Audience

Ms. Knight 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. Ms. Knight noted that no public comment cards had been received.

3. Approval of the June 29, 2006 Meeting Minutes

The Committee reviewed the minutes from the June 29, 2006 meeting. Oddvar Tveit, City of Tempe, moved and Doug Kukino, City of Glendale, seconded and the motion to approve the June 29, 2006 meeting minutes carried unanimously.

4. Evaluation of Proposed CMAQ Projects for the FY 2008-2012 MAG TIP

Dean Giles, Maricopa Association of Governments, presented the evaluation of proposed Congestion Mitigation and Air Quality Improvement (CMAQ) projects submitted for the FY 2008-2012 MAG Transportation Improvement Program (TIP). He stated that this agenda item includes two possible actions by the Committee. The first action is the recommendation to forward the evaluation of proposed CMAQ projects for the FY 2008-2012 MAG TIP to the MAG Transportation Review Committee (TRC) and modal committees for use in prioritizing projects. The second action is to rank the Air Quality Projects to be forwarded to the TRC. He indicated that the projects were due to MAG by September 1, 2006. Mr. Giles added that MAG conducted an air quality assessment of the proposed projects using the Methodologies for Evaluation Congestion Mitigation and Air Quality Improvement Projects, August 15, 2005, whenever possible.

Mr. Giles provided the approximate FY 2012 CMAQ funding levels based on the MAG Regional Transportation Plan (RTP) and the FY 2008-2012 MAG TIP Guidance Report. He stated that CMAQ funding is also available for the programming of Intelligent Transportation System (ITS) projects for fiscal years 2008, 2009, and 2010 from the Regional Transportation Plan Arterial Street Life Cycle Program. Mr. Giles indicated that the results of the project evaluation were provided to the Committee in order of cost-effectiveness and that the evaluation is one piece of information used by the TRC and modal committees in prioritizing projects. Mr. Giles also provided a timeline.

Peter Hyde, Arizona Department of Environmental Quality, asked if the Committee would benefit from having the Congestion Management System (CMS) scores. Mr. Giles replied that the CMS scores were not available when the evaluation was mailed to the Committee, but will be provided for the October TRC meeting. Mr. Giles stated that the CMS scores could be provided to the Committee when available. Mr. Hyde asked if the CMS scores would be helpful for the Committee

in evaluating the projects and inquired if the scores have been provided in the past. Mr. Giles replied that the CMS scores have been provided in the past when available.

Paul Ward, Maricopa Association of Governments, indicated that the majority of the projects submitted are not adding capacity and therefore would not have CMS scores. However, some bicycle and pedestrian and ITS projects may have CMS scores. He added that MAG is planning to review the Congestion Management System Process. The review may include expanding the scoring system to allow some of these projects to be ranked through the Congestion Management System.

Dave Berry, Arizona Motor Transport Association, commented that the funds are separated into air quality, bicycle and pedestrian, and ITS categories. He stated that air quality projects have a cost-effectiveness of approximately \$1,400 to \$95,000/metric ton and that the cost-effectiveness for bicycle and pedestrian projects are much lower. He commented on the significance of the PM-10 problem and expressed concern about recommending projects with a high cost-effectiveness. Mr. Berry asked if there is any flexibility on how the funds are allocated. Lindy Bauer, Maricopa Association of Governments, replied that the projects are split by mode to match the plan allocations provided in the Regional Transportation Plan, which has funds allocated through 2026. She stated that the RTP was presented to the voters in 2004 and there is the expectation that it be multimodal. Ms. Bauer added that for air quality, there are funds for the street sweeper and paving unpaved roads projects, which have been helpful in addressing the PM-10 problem. She stated that projects have been submitted for paving unpaved roads and street sweepers and will be discussed later on the agenda. Ms. Bauer mentioned that it all ties back to the RTP.

Mr. Berry commented that there is a process for changing the Regional Transportation Plan. He stated that the Committee may want to ask the MAG Transportation Policy Committee (TPC) to consider changes to the RTP. Mr. Berry mentioned that the funds should be going to projects that will best address the PM-10 problem. Ms. Knight commented on the complexity of the issue. Mr. Berry stated that the discussion is worth having.

Ms. Knight stated that MAG is working on the PM-10 Five Percent Plan and the Emissions Inventory. She commented on the timing and mentioned that once the Emissions Inventory is available, there will be a better idea of the PM-10 sources. Ms. Knight mentioned that putting more money towards air quality projects is something that could be done in the future. Mr. Berry stated that the projects are for FY 2012.

Amanda McGennis, Associated General Contractors, stated that she agrees with Mr. Berry. She mentioned that if the emission reductions for a project are not significant, then the money needs to be spent elsewhere. Ms. McGennis commented on the escalating cost of projects and how the Regional Transportation Plan will be effected.

Ms. Bauer mentioned that the region has a serious PM-10 pollution problem. She stated that there have been a number of PM-10 exceedances in 2006; therefore, 2006 cannot be used as the first year of clean data. The hope is to be clean in 2007, 2008, and 2009. Ms. Bauer stated that she appreciates the sensitivity of the Committee to the biggest air pollution problem in the region. She mentioned that MAG worked hard on the Regional Transportation Plan and that it is the expectation of the voters that the RTP be multimodal. She stated that CMAQ is one of several sources of funding in the Regional Transportation Plan. Ms. Bauer indicated that for some projects such as paving unpaved roads, CMAQ is not the only funding source. Sometimes other sources of funds can

be spent faster. Ms. Bauer mentioned that CMAQ has other requirements which must be met before the funds can be spent. She added that the TPC is the major transportation committee that worked on the Regional Transportation Plan.

Mr. Hyde made a motion to recommend that the TPC consider reallocating funds in the TIP to air quality projects that address the dust control problem. Mr. Berry seconded the motion. Mr. Hyde commented on the amount of funds that should be reallocated. He added that a complementary part of the motion should be to invite more air quality projects that reduce PM-10 emissions. Mr. Hyde referred to the list of projects submitted and stated that there is only a handful of paving and sweeping projects. He suggested letting the community know that the Committee would like to see more projects that reduce PM-10 and possibly a more diverse list of projects.

Ms. Knight stated that from a city's perspective, it would be hard to go back and get more projects for the current TIP. She suggested moving the projects forward and said that it is too late in the process to be asking cities to add new projects in the FY 2008-2012 TIP. Mr. Berry stated that the motion does not include a time period. He commented on inviting everyone to develop good ways to control PM-10 and increasing awareness of the CMAQ funds that are available. Ms. Knight stated that the cities have been working to find projects that address the PM-10 problem.

Ms. Knight asked that the motion be restated. Ms. Bauer stated that Mr. Hyde made a motion to recommend that the TPC consider reallocating funds in the TIP to air quality projects that address the dust control problem and invite more air quality projects to be submitted from the community. Mr. Berry asked if Maricopa County and the State could submit projects located within the PM-10 Nonattainment Area. Ms. Bauer responded that is correct. Mr. Berry inquired about private businesses. Ms. Bauer replied that private businesses are eligible if the project is brought through a public sponsor. She said there may also need to be an agreement that the private sector would have to sign. Mr. Berry inquired about Indian Communities. Ms. Bauer responded that Indian Communities are considered government status and have applied for CMAQ funds in the past.

Michael Powell, City of Avondale, asked if the funds that are currently being provided are allocated in a way that is most effective at addressing the PM-10 problem. He commented on restructuring the process so that it addresses factors from a more regional basis than from a city by city basis. Mr. Powell mentioned that may be what he is hearing from some members of the Committee during the discussion. Ms. Knight suggested voting on the motion and then discussing how the TIP Process works. Ms. McGennis clarified that the funds are in the current TIP. Ms. Knight replied that is correct. She called for a vote on the motion to recommend that the TPC consider reallocating funds in the TIP to air quality projects that address the dust control problem and invite more air quality projects to be submitted from the community. The motion passed unanimously.

Mr. Powell stated that a work group could be established to evaluate the effectiveness of the TIP Process. He mentioned that recommending projects with a cost-effectiveness over \$1 million seems to be misguided. Mr. Powell suggested that a work group be established to evaluate whether the region is utilizing the funds in a way that we can successfully address the problem. Ms. Knight stated that many of the Committee members are committed to air quality; however, there are many goals in the TIP. Ms. Bauer suggested having a member of the MAG Transportation Division speak at the October Air Quality Technical Advisory Committee meeting regarding the TIP Process. Mr. Powell stated that he was in favor of MAG staff organizing a presentation.

Mr. Berry made a motion to forward the evaluation of proposed CMAQ projects for the FY 2008-2012 MAG TIP to the TRC and modal committees for use in prioritizing projects for only the projects that have a cost-effectiveness of \$100,000/metric ton or less. Ms. Knight stated that the Committee typically forwards the entire evaluation and it may be outside the purview of the Committee to only select the projects with a cost-effectiveness of \$100,000/metric ton or less. Mr. Berry indicated that the Committee could forward the entire evaluation, but strongly recommend only the projects with a cost-effectiveness of \$100,000/metric ton or less. Ms. Knight indicated that it is important to forward the entire evaluation.

Mr. Hyde requested that the motion be amended to recommend projects with a cost-effectiveness of \$200,000/metric ton or less. Mr. Berry indicated that he did not object to amending the motion. Ms. Knight clarified that the motion would be to forward the entire evaluation of proposed CMAQ projects for the FY 2008-2012 MAG TIP to the TRC and modal committees for use in prioritizing projects and strongly recommend only the projects that have a cost-effectiveness of \$200,000/metric ton or less.

Wienke Tax, Environmental Protection Agency, asked if the amount of CMAQ funds requested equals the amount available for each table. Ms. Bauer replied that the amount of CMAQ funds requested exceeds the amount available.

Mr. Berry commented that if the TRC only recommended the projects with a cost-effectiveness of \$200,000/metric ton or less, there may be funds remaining for more cost-effective PM-10 projects. Ms. McGennis seconded the motion.

Brian O'Donnell, Southwest Gas Corporation, stated that some of the projects that help move traffic have a cost-effectiveness of greater than \$200,000/metric ton. He mentioned that he is in favor of projects that move traffic. Mr. Berry stated that if the emission reductions are small, the project would likely not result in moving much traffic. Mr. Tveit commented that it is difficult to draw the line at a specific cost-effectiveness. He stated that a project could have a big impact on PM-10, but be very expensive. Antonio DeLaCruz, City of Surprise, expressed concern about the motion. He stated that Surprise has requested CMAQ funds for projects that are critical to the City and that the cities may be funding portions of the projects. Ms. Knight mentioned that air quality is one of many missions for the cities.

Mr. Kukino commented that the earlier motion sends a message to the TPC. He asked if the Committee needs to take action today. Ms. Knight replied that action is necessary today due to the timeline for the agenda item. Mr. Giles added that the MAG Intelligent Transportation Systems Committee is scheduled to meet October 4, 2006.

Mr. Berry commented on the importance of the cost-effectiveness of a project. Ms. Knight mentioned that the cost-effectiveness is included on the tables and that the projects are prioritized in order of cost-effectiveness. Mr. Berry stated that the motion does not preclude the TRC or modal committees from recommending other projects.

Larry Person, City of Scottsdale, stated that the second motion contradicts the first motion that passed. He referred to the PM-10 emission reductions column in Table Two. Mr. Person mentioned that many of the projects with PM-10 emission reductions have a cost-effectiveness greater than \$200,000/metric ton. He commented that the motion is going in the wrong direction. Ms. Knight called for a vote on the motion to forward the entire evaluation of proposed CMAQ projects for the

FY 2008-2012 MAG TIP to the TRC and modal committees for use in prioritizing projects and strongly recommend only the projects with a cost-effectiveness of \$200,000/metric ton or less. The motion failed.

Mr. Kukino made a motion to forward the evaluation of proposed CMAQ projects for the FY 2008-2012 MAG TIP to the TRC and modal committees for use in prioritizing projects. Betsy Turner, Valley Metro, seconded, and the motion carried unanimously.

Mr. Person commented that all of the Air Quality Projects in Table One of the Attachment would all be funded with the amount of CMAQ funding available. He made a motion to forward Table One that includes a priority ranking of Air Quality Projects to the TRC based on PM-10 reductions rather than cost-effectiveness. Mr. O'Donnell seconded, and the motion carried with Ms. Turner voting no.

5. Evaluation of Proposed PM-10 Paving Unpaved Road Projects for FY 2008 and 2009 CMAQ Funding

Mr. Giles presented the evaluation for proposed PM-10 Paving Unpaved Road Projects for emission reductions and corresponding cost-effectiveness for FY 2008 and FY 2009 CMAQ funding. He indicated that a revised table was at each place that includes a correction made by the City of Litchfield Park for FY 2008 CMAQ funds requested of \$530,979 and the cost-effectiveness. Mr. Giles stated that the deadline for submitting projects was September 8, 2006. He mentioned that four projects requesting approximately \$4.5 million were received for FY 2008 and four projects requesting approximately \$4.1 million were received for FY 2009. Mr. Giles added that a local cash match of 30 percent is required.

Mr. Giles stated that the Regional Transportation Plan assumes the annual paving of at least ten miles of unpaved roads for emission reduction credit for conformity. He indicated that the FY 2007-2011 MAG TIP identifies \$2,000,000 in FY 2008 and \$3,500,000 in FY 2009 CMAQ funding for Paving Unpaved Road Projects.

Ms. Tax asked if the ten miles of paving unpaved roads assumed for conformity is for one year. She commented that the table does not include ten miles for FY 2008. Cathy Arthur, Maricopa Association of Governments, replied that the assumption is ten miles per year after the attainment date of 2006. Ms. Knight stated that the cities also pave roads using local funds.

Mr. O'Donnell commented that the air moves from southwest to northeast. He inquired about the impact of a Surprise project to pave unpaved roads west of 219th Avenue. Ms. Knight responded that the project is within the PM-10 Nonattainment Area. Jo Crumbaker, Maricopa County Air Quality Department, stated that PM-10 is a localized problem and that paving unpaved roads will impact the public that lives in that area. Ms. Crumbaker mentioned that under stagnant conditions, PM-10 does travel further. The winter readings of PM-10 follow the carbon monoxide pattern. She stated that it may be associated with a very low diffusion break that results from the inversion in the winter. Mr. Giles stated that MAG received two applications from the City of Surprise, one in each fiscal year. He added that the Surprise project to pave roads west of 219th Avenue is bound by roads with high traffic volume.

Mr. Hyde commented on the shortfall of \$3.1 million between the amount of CMAQ funds requested and the amount available. He suggested funding all of the projects by using \$3.1 million from the

other categories. Mr. Berry commented that paving unpaved roads and street sweeping are some of the more effective things that can be done to address the PM-10 problem. He added that more clarity on the issue should be given as the projects move forward. Ms. Knight commented on the timing.

Mr. Hyde commented on an Avondale bicycle and pedestrian project for \$6.3 million. Mr. Giles replied that the Avondale project is for FY 2012. The paving unpaved roads projects presented under this agenda item are for FY 2008 and FY 2009.

Mr. Berry made a motion to forward to the TRC the proposed PM-10 Paving Unpaved Road Projects for FY 2008 and FY 2009 CMAQ funding and encourage the TRC to find funding for all of the projects. Mr. DeLaCruz seconded, and the motion carried unanimously.

6. Evaluation of Proposed PM-10 Certified Street Sweeper Projects for FY 2007 CMAQ Funding

Mr. Giles presented the evaluation of the proposed PM-10 Certified Street Sweeper Projects for FY 2007 CMAQ funding. Twelve projects requesting approximately \$1.95 million in federal funds were received. The FY 2007 Unified Planning Work Program and FY 2007-2011 MAG TIP contain \$1.44 million in FY 2007 CMAQ funding for the purchase of PM-10 certified street sweepers. Mr. Giles indicated that project requests were due by September 8, 2006 and that a minimum local match of 5.7 percent is required. He stated that the projects are listed in order of cost-effectiveness. Mr. Giles added that the Mesa and Gilbert (#2) projects are within one-half mile of a PM-10 monitor. He mentioned that the first eight street sweeper projects would be funded with the \$1.44 million FY 2007 CMAQ funding available.

Mr. Kukino made a motion to recommend the prioritized list of proposed PM-10 Certified Street Sweeper Projects for FY 2007 CMAQ funding and to retain the prioritized list for any additional FY 2007 CMAQ funds that may become available due to year-end closeout, including any redistributed obligation authority, or additional funding received by this region. Lucky Roberts, Town of Buckeye, seconded the motion.

Mr. Berry inquired about the cost variance among the street sweeper projects. Mr. DeLaCruz discussed the different types of street sweepers. Mr. Giles added that the South Coast Air Quality Management District has a list of 53 street sweepers with a wide variety of features and costs that could be selected by member agencies. Mr. Hyde commented on recommending that all street sweeper projects be funded now. Ms. Knight called for a vote on the motion, which passed with Ms. McGennis, Mr. Berry, Mr. Hyde, and Mannie Carpenter, Valley Forward, voting no.

7. Call for Future Agenda Items

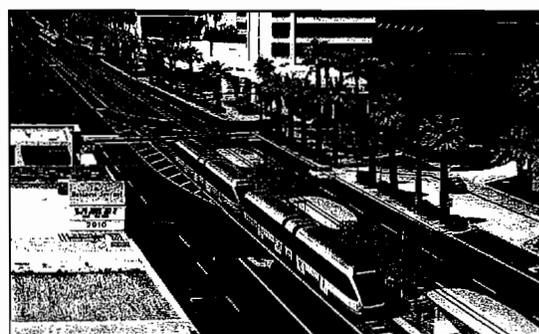
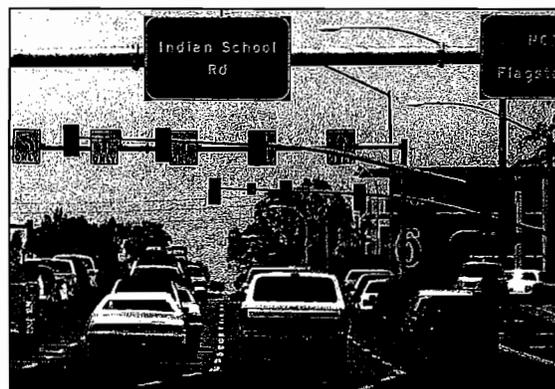
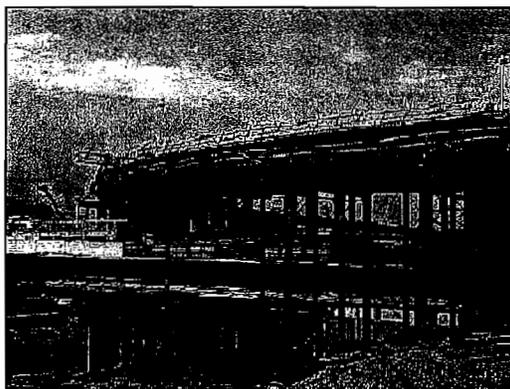
Ms. Knight announced that the next meeting of the Committee is tentatively scheduled for October 26, 2006. Ms. Tax mentioned that at the June 29, 2006 meeting, there was a request for a future agenda item on how the Committee functions. She asked that the Committee have a future agenda item to look at the structure of the Committee and how it works. Ms. Bauer asked if the agenda item would be to discuss how a recommendation moves forward and is considered. Ms. Tax added that the presentation should also include how the Committee structure works. She commented on an Air Quality Technical Advisory Committee recommendation that was changed as it moved forward. Mr. Berry stated that there should be a presentation and discussion on the topic. He also mentioned that there needs to be air quality advocacy on the committees that review a recommendation made by the Air Quality Technical Advisory Committee.

Mr. Knight mentioned that Ms. McGennis also requested a future agenda item. Ms. McGennis stated that she would like to give a presentation on two dust suppressant demonstrations. With no further comments, the meeting was adjourned.

**Let's Keep
Moving!**



Regional Transportation Plan



November 25, 2003

REGIONAL
TRANSPORTATION
PLAN



**MARICOPA
ASSOCIATION of
GOVERNMENTS**

TABLE 5-5

FUNDING PERCENT BY MODE (Expressed by Percentage)								
Mode	Program Area	½ Cent	ADOT Funds	FTA (5307)	FTA (5309)	CMAQ	MAG-STP	Total Regional Funding
Freeways	Capital	52.0	100.0	0.0	0.0	19.1	0.0	55.0
	Operations	4.2	0.0	0.0	0.0	0.0	0.0	2.2
	Total	56.2	100.0	0.0	0.0	19.1	0.0	57.3
Streets	Capital	10.2	0.0	0.0	0.0	13.4	100.0	9.3
Buses	Capital	4.2	0.0	90.6	12.7	0.0	0.0	8.4
	Operations	11.9	0.0	0.0	0.0	0.0	0.0	6.4
	Total	16.0	0.0	90.6	12.7	0.0	0.0	14.8
LRT	Capital	14.4	0.0	0.0	87.3	35.9	0.0	14.7
Other Transit	Capital	0.4	0.0	9.4	0.0	0.0	0.0	0.8
	Operations	2.5	0.0	0.0	0.0	0.0	0.0	1.3
	Total	2.9	0.0	9.4	0.0	0.0	0.0	2.1
Planning	Programs	0.4	0.0	0.0	0.0	0.0	0.0	0.2
Bicycle/ Pedestrian	Capital	0.0	0.0	0.0	0.0	17.0	0.0	0.8
Air Quality	Programs	0.0	0.0	0.0	0.0	14.6	0.0	0.7
Total Funding	Capital	81.1	100.0	100.0	100.0	85.4	100.0	89.1
	Operations	18.9	0.0	0.0	0.0	14.6	0.0	10.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent Funding by Major Mode								
Freeways		56.2	100.0	0.0	0.0	19.1	0.0	57.3
Streets		10.2	0.0	0.0	0.0	13.4	100.0	9.3
Transit		33.3	0.0	100.0	100.0	35.9	0.0	31.7
Other		0.4	0.0	0.0	0.0	31.6	0.0	1.8
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Maricopa Association of Governments

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM FACT SHEET

According to the final Congestion Mitigation and Air Quality Improvement (CMAQ) Program Guidance, effective April 28, 1999, the primary purpose of the CMAQ program is to fund transportation projects and programs in air quality nonattainment and maintenance areas that reduce transportation-related emissions. Table 1 provides a description of the 23 project categories contained in federal CMAQ guidance as well as general activities and projects eligible for CMAQ funding. In addition, Table 1 includes the CMAQ eligible projects and programs added from transportation reauthorization, Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU). Table 2 provides a list of ineligible CMAQ activities and projects.

Table 1. Eligible CMAQ Activities and Projects

1. **Transportation activities in an approved SIP or Maintenance Plan are to be given highest priority for CMAQ funding.**
2. **Transportation control measures (TCMs) found in 42 U.S.C. §7408(f)(1)**
 - programs for improved public transit
 - restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles
 - employer-based transportation management plans, including incentives
 - trip-reduction ordinances
 - traffic flow improvement programs that achieve emission reductions
 - fringe and transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit service
 - programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use
 - programs for the provision of all forms of high-occupancy, shared ride services
 - programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place
 - programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas
 - programs to control extended idling of vehicles
 - programs to reduce motor vehicle emissions from extreme cold-start conditions
 - employer-sponsored programs to permit flexible work schedules
 - programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity
 - programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest
3. **Extreme Low-Temperature Cold Start Programs**
 - retrofitting vehicles and fleets with water and oil heaters
 - installing electrical outlets and equipment in publicly-owned garages or fleet storage facilities
4. **Public-Private Partnerships**
 - requires proposals involving private entities demonstrating strong emission reduction benefits and a legal written agreement between public agency and private or nonprofit entity specifying use of funds, roles and responsibilities of participating agencies, cost sharing arrangements for capital investments and/or operating expenses, and disposition of land, facilities, and equipment should agreement be changed
 - eligible costs under this section may not include costs to fund an obligation imposed on private sector or nonprofit entities under the CAA or any other federal law except where the incremental portion of a project exceeds obligation under Federal law

5. **Alternative Fuels**
 - purchase of publicly-owned alternative fuel vehicles
 - fleet conversions
 - establishment of publicly-owned on-site fueling facilities and other infrastructure needed to fuel alternative-fuel vehicles, if the project does not duplicate privately-owned services; exception for a public-private partnership
6. **Traffic Flow Improvements**
 - projects to develop, establish, and implement the congestion management system for both highway and transit facilities
 - traffic signal modernization, coordination, or synchronization projects designed to improve traffic flow within a corridor
 - Intelligent Transportation Systems (ITS): regional multimodal traveler information systems, traffic signal control systems, freeway management systems, transit management systems, incident management programs, electronic fare payment systems, and electronic toll collection systems
 - in some cases, the operating expenses for traffic flow improvements are eligible for CMAQ funding for a 3-year period if the project has air quality benefits, expenses are incurred from new or additional services, and previous funds are not displaced
7. **Transit Project**
 - transit facilities associated with new or enhanced transit service, if supported by a quantified estimate of the emissions reduced
 - acquisition of new transit vehicles (bus, rail, van) to expand fleet
 - operating assistance used to support the start-up of new transit services for a maximum of 3 years
 - regular transit fares may be subsidized if part of an overall program for preventing exceedances of NAAQS during periods of high pollutant levels
8. **Bicycle and Pedestrian Facilities and Programs**
 - construction of bicycle and pedestrian facilities
 - non-construction projects related to safe bicycle use
 - establishment and funding of State bicycle/pedestrian coordinator positions
9. **Travel Demand Management**
 - market research, planning in support of travel demand management implementation
 - traffic calming measures, if the project leads to reduced emissions
 - capital expenses required to implement TDM measures
 - operating assistance to administer and manage TDM programs for up to 3 years
 - marketing and public education efforts to support and bolster TDM measures
10. **Outreach and Rideshare Activities**
 - outreach activities such as public education on transportation and air quality, advertising of transportation alternatives to single-occupancy vehicle travel, and technical assistance to employers or other outreach activities to promote non single-occupancy vehicle travel options
 - marketing programs to increase use of transportation alternatives to single-occupancy travel and public education campaigns involving the linkage between transportation and air quality
 - transit “stores” selling fare media and dispensing route and schedule information which occupy leased space
 - carpooling and vanpooling programs including computer matching of individuals seeking to carpool and employer outreach to establish rideshare programs; upgrades for computer matching software
 - purchase or lease of publicly-owned vanpool vehicles that are not in direct competition with and impede private sector initiatives; vanpool activities for new or expanded service are subject to the 3-year limitation on operating costs
 - establishment of transportation management associations, provided that the association performs a specified purpose as part of air quality improvement strategy; eligible costs include coordinating and marketing rideshare programs, providing shuttle services, developing parking management programs. Eligible expenses for reimbursement of association startup costs are limited to a 3-year period
11. **Telecommuting**
 - planning, technical and feasibility studies, training, coordination, marketing and promotion activities
12. **Fare/Fee Subsidy Programs**
 - transit services including subsidized transit fares only if offered as a component of a comprehensive, targeted program to reduce single-occupancy vehicle use during episodes of high pollutant concentrations
 - other demand management strategies including subsidized fares or fees for vanpools, shuttle services, flat-fare taxi programs
 - other demand management strategies including public information and marketing of non single-occupancy vehicle alternatives, parking management measures, employer-based commuter choice programs, and better coordination of existing transportation services
 - fare/fee subsidies under the CMAQ program are intended as short-term incentives with a 3-year time limit

- 13. Intermodal Freight**
 - capital improvements and operating assistance for improving intermodal freight facilities where air quality benefits can be demonstrated
- 14. Planning and Project Development Activities**
 - project development activities (preliminary engineering, project planning studies, including studies for the preparation of environmental or NEPA documents and related transportation/air quality project development activities) that lead to construction of facilities or new services or programs with air quality benefits
 - project development activities directly related to a transportation control measure
 - the costs of air quality monitoring necessary to determine the air quality impacts of a proposed project which is eligible for CMAQ funding
- 15. Inspection/Maintenance Eligibility**
 - construction of facilities and purchase of equipment for publicly-owned I/M facilities that constitute new or additional efforts; existing funding should not be displaced, and operating expenses are only eligible for 3 years
 - establishment of I/M programs at privately-owned stations may be funded under the CMAQ provisions for “public-private partnership”
 - establishment of “portable” I/M programs provided that they are public services, contribute to emissions reductions, and meet relevant regulations
 - projects necessary for the development of I/M programs and one-time start-up activities, such as updating quality software or developing a mechanic training curriculum
- 16. Magnetic Levitation Transportation Technology Deployment Programs**
 - a portion of the full project cost including planning, engineering, and construction
- 17. Experimental Pilot Programs**
 - a project or program that can reasonably be defined as a “transportation” project and may reasonably be expected to reduce emissions “through reductions in vehicle miles traveled (VMT), fuel consumption or through other factors”
- 18. In particulate matter nonattainment or maintenance areas, examples of eligible projects and programs include:**
 - paving dirt roads
 - diesel bus replacements
 - more effective street-sweeping equipment

SAFETEA-LU expanded CMAQ eligibility to the projects and programs listed below. SAFETEA-LU added a new requirement that States and MPOs give priority to projects and programs to diesel retrofits and other cost-effective emission reduction activities, and cost-effective congestion mitigation activities that provide air quality benefits.

- 19. Establish or operate advanced truck stop electrification systems**
- 20. Improve transportation systems management and operations that mitigate congestion and improve air quality**
- 21. Involve the purchase of integrated, interoperable emergency communications equipment**
- 22. Involve the purchase of diesel retrofits that are for motor vehicles or non-road vehicles and non-road engines used in construction projects located in ozone or particulate matter nonattainment or maintenance areas and funded under 23 USC**
- 23. Conduct outreach activities that provide assistance to diesel equipment and vehicle owners and operators regarding the purchase and installation of diesel retrofits.**

Table 2. Ineligible CMAQ Activities and Projects

- 1. Scrappage programs**
- 2. Construction programs which will add new capacity for single-occupancy vehicle (SOV) travel, unless the project consists of a high occupant vehicle (HOV) facility that is available to SOV only at off-peak travel times**
- 3. Routine rehabilitation and maintenance activities**
- 4. Replacement-in-kind of track or other equipment, reconstruction of bridges, stations and other facilities, and repaving or repairing roads**
- 5. Projects outside of the nonattainment or maintenance area boundaries, except in cases where the project is located in close proximity to the nonattainment or maintenance area and the benefits will be realized primarily within the nonattainment or maintenance area boundaries**
- 6. Public-private partnerships involving the implementation of statutorily mandated measures**
- 7. Projects not meeting the specific eligibility requirements under United States Code titles 23 or 49**

FACT SHEET
FINAL REVISIONS TO THE NATIONAL AMBIENT AIR QUALITY STANDARDS
FOR PARTICLE POLLUTION (PARTICULATE MATTER)

SUMMARY OF ACTION

- To better protect public health and welfare for millions of Americans across the country, EPA on September 21, 2006 issued the Agency's most protective suite of national air quality standards for particle pollution ever.
- Particle pollution, also called particulate matter or PM, is a complex mixture of extremely small particles and liquid droplets in the air. When breathed in, these particles can reach the deepest regions of the lungs. Exposure to particle pollution is linked to a variety of significant health problems. Particle pollution also is the main cause of visibility impairment in the nation's cities and national parks.
- The final standards address two categories of particle pollution: *fine particles* (PM_{2.5}), which are 2.5 micrometers in diameter and smaller; and *inhalable coarse particles* (PM₁₀) which are smaller than 10 micrometers. (A micrometer is 1/1000th of a millimeter; there are 25,400 micrometers in an inch.)
- EPA is strengthening the 24-hour fine particle standard from the 1997 level of 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to $35\mu\text{g}/\text{m}^3$, and retains the current annual fine particle standard at $15\mu\text{g}/\text{m}^3$. The Agency also is retaining the existing national 24-hour PM₁₀ standard of $150\mu\text{g}/\text{m}^3$.
- The Agency is revoking the annual PM₁₀ standard, because available evidence generally does not suggest a link between long-term exposure to current levels of coarse particles and health problems. EPA is protecting all Americans from effects of short-term exposure to inhalable coarse particles by retaining the existing daily PM₁₀ standard of 150 micrograms per cubic meter.
- Scientific studies have found an association between exposure to particulate matter and significant health problems, including: aggravated asthma; chronic bronchitis; reduced lung function; irregular heartbeat; heart attack; and premature death in people with heart or lung disease.
- EPA selected levels for the final standards after completing an extensive review of thousands of scientific studies on the impact of fine and coarse particles on public health and welfare. The Agency also carefully reviewed and considered public comment on the proposed standards. EPA held three public hearings and received about 120,000 written comments.
- The Agency provisionally assessed new, peer-reviewed studies about particle pollution and health (including some studies received during the comment period) to ensure that the

Agency was aware of new science before setting the final standards. That assessment did not materially change EPA's understanding of PM. EPA did not base its decision on these new studies, however, because they have not been through as rigorous a level of review as the science on which the Agency based its December 2005 proposal. EPA will consider these new studies during the next review of the PM standards.

- EPA has issued rules that will help states meet the standards by making significant strides toward reducing fine particles. These rules include the Clean Air Interstate Rule to dramatically reduce and cap particle pollution-forming emissions from power plants in the eastern United States, the Clean Diesel Program to dramatically reduce emissions from highway, nonroad and stationary diesel engines, and the Clean Air Visibility rule, which will reduce emissions affecting air quality in national parks.

THE FINAL STANDARDS

- For both fine and coarse particles, EPA sets two types of standards: primary standards, to protect public health; and secondary standards, to protect the public welfare from effects including visibility impairment, damage to building and national monuments, and damage to ecosystems.

Fine Particle Standards

- EPA has two primary standards for fine particles: an annual standard, designed to protect against health effects caused by exposures ranging from days to years; and a 24-hour standard, designed to provide additional protection on days with high peak PM_{2.5} concentrations.

24-hour standards

- o *Primary* -- EPA has substantially strengthened the primary 24-hour fine particle standard, lowering it from the current level of 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to $35\mu\text{g}/\text{m}^3$. EPA based this decision on an assessment of a significantly expanded body of scientific information. The assessment concluded that the standard should be strengthened to better protect the public from the health effects associated with short-term fine particle exposures.
- o *Secondary* -- The Agency has set the secondary standard at the same level as the primary standard ($35\mu\text{g}/\text{m}^3$).

Annual standards

- o *Primary* -- EPA is retaining the primary annual standard at $15\mu\text{g}/\text{m}^3$ based on its assessment of several expanded, re-analyzed and new studies that have increased the Agency's confidence in associations between long-term PM_{2.5} exposure and serious health effects that were documented in the prior review. The assessment concluded that this standard continues to be appropriate to protect the public from health effects associated with long-term fine particle exposures.
- o *Secondary* -- The Agency has set the secondary standard at the same level as the primary standard ($15\mu\text{g}/\text{m}^3$).

Coarse Particle Standards

24-hour standards

- EPA is retaining the current 24-hour PM₁₀ standards to protect against health and welfare effects associated with exposure to some types of coarse particles. Short-term exposure to coarse particles in urban and industrial areas is associated with serious health effects. Retaining this standard will provide protection in all areas of the country against the effects of short-term exposure to such coarse particles.
- Scientific evidence links health problems to coarse particle exposure in urban and industrial areas, but evidence about exposure in rural areas is limited. The Agency is recommending that States focus their control programs on urban and industrial sources that are contributing to air quality violations.
- The Agency intends to characterize uncertainties in the currently available information on coarse particles as part of the Agency's ongoing PM research program.

Annual standards

- EPA is revoking the annual PM₁₀ standards, because there is insufficient evidence linking health problems to long-term exposure to inhalable coarse particle pollution.

THE FORM OF THE STANDARDS

- When EPA sets air quality standards, it also must specify the air quality statistics that the Agency will use to determine whether an area is meeting the standards. These statistics are known as the "form of the standard" and are derived separately for each standard.

Fine particles – form of the 24-hour standard

- An area will meet the 24-hour standard if the 98th percentile of 24-hour PM_{2.5} concentrations in a year, averaged over three years, is less than or equal to the level of the standard of 35 µg/m³. This is the same form as the current 24-hour standard.

Fine particles – form of the annual standard

- An area will meet the annual PM_{2.5} standard when the three-year average of the annual average PM_{2.5} concentration is less than or equal to 15 µg/m³. This is the same form as the current annual standard.
- The revisions limit the conditions under which some areas may average measurements from multiple community-oriented monitors to determine compliance with the annual standard.

Inhalable coarse particles – form of the 24-hour standard

- An area will meet the 24-hour PM₁₀ standard when the 150µg/m³ level is not exceeded more than once per year on average over a three year period. This is the same form as the current 24-hour standard.

SOURCES OF PARTICLE POLLUTION

Fine particles

- Fine particles can be emitted directly, such as in smoke from a fire, or they can form from chemical reactions of gases such as sulfur dioxide, nitrogen dioxide and some organic gases.
- Sources of fine particle pollution (or the gases that contribute to fine particle formation) include power plants, gasoline and diesel engines, wood combustion, high-temperature industrial processes such as smelters and steel mills, and forest fires.

Coarse particles

- Coarse particles can be generally divided into rural, natural crustal material such as dust and urban particles such as road dust kicked up by traffic (called *resuspended* dust), construction and demolition, industries; and biological sources.

PARTICLE POLLUTION AND PUBLIC HEALTH

- Thousands of new scientific studies on particulate matter have been published and peer-reviewed since EPA last reviewed the standards in 1997, and before the "cutoff date" for inclusion in the "criteria document" of studies for this review. These include several studies used in the 1997 review that have been extended, and the data reanalyzed.
- The majority of the studies assessed for the current review were published prior to 2003. To ensure that the EPA Administrator was fully aware of new science before making a final decision on the standards, EPA conducted a survey and provisional assessment of relevant new studies. The Agency did not rely on these studies in making its decision on the standards, however, because they have not been through as rigorous a level of review as the science on which the Agency based its December 2005 proposal. EPA will consider these studies in its next review.

Exposure to fine particle pollution

- **Health effects associated with short-term exposure to fine particles (PM_{2.5}) include:**
 - o Premature death in people with heart and lung disease
 - o Non-fatal heart attacks
 - o Increased hospital admissions, emergency room visits and doctor's visits for respiratory diseases
 - o Increased hospital admission and ER visits for cardiovascular diseases
 - o Increased respiratory symptoms such as coughing, wheezing and shortness of breath
 - o Lung function changes, especially in children and people with lung diseases such as asthma.
 - o Changes in heart rate variability
 - o Irregular heartbeat

- **Health effects associated with long-term exposure to fine particles (PM_{2.5}) include:**
 - Premature death in people with heart and lung diseases, including death from lung cancer
 - Reduced lung function
 - Development of chronic respiratory disease in children

Exposure to coarse particle pollution

- **Health effects associated with short-term exposure to coarse particles include:**
 - Premature death in people with heart or lung disease
 - Hospital admissions for heart disease
 - Increased hospital admissions and doctors' visits for respiratory disease
 - Increased respiratory symptoms in children
 - Decreased lung function

- Available evidence generally does not suggest a link between *long-term* exposure to coarse particles and health problems.

IMPLEMENTING THE STANDARDS

- The Clean Air Act requires EPA to designate areas as attainment (meeting the standards) or nonattainment (not meeting the standards) when the Agency sets a new standard, or revises an existing standard.

- **The following schedule will apply to areas not meeting the 24-hour fine particle standard:**
 - States will make recommendations by Nov. 2007 for areas to be designated attainment (meeting the standards) and nonattainment (violating the standards).
 - EPA will make designations by November 2009; those designations will become effective in April 2010.
 - State Implementation Plans, which outline how states will reduce pollution to meet the standards, will be due three years after designations, in April 2013.
 - States must meet the standards by April 2015, with a possible extension to April 2020.

- EPA has issued a number of rules to help states to meet the standards. These rules make significant strides toward reducing fine particle pollution both regionally and across the country. These rules include the Clean Air Interstate Rule to reduce emissions from power plants in the eastern United States; the Clean Diesel Program to reduce emissions from highway, nonroad and stationary diesel engines nationwide, and the Clean Air Visibility Rule to reduce emissions affecting air quality in national parks.

- EPA will not designate new attainment and nonattainment areas for the 24-hour PM₁₀ standards.

BENEFITS AND COSTS

- While the Clean Air Act prevents EPA from considering costs in setting or revising National Ambient Air Quality Standards, the Agency does analyze the benefits and costs of implementing standards as required by Executive Order 12866 and guidance from the White House Office of Management and Budget.
- To estimate the benefits of meeting a standard, EPA uses peer-reviewed studies of air quality and health and welfare effects, sophisticated air quality models, and peer-reviewed studies of the dollar values of public health improvements.

When fully met, the revised 24-hour PM_{2.5} standards are estimated to yield between \$9 billion and \$75 billion a year in health and visibility benefits in 2020. This estimate is based on the opinions of outside experts on PM and the risk of premature death, along with other benefits information.

- Based on published scientific studies alone, EPA estimates that the most likely benefits of meeting the revised 24-hour PM 2.5 standards will range from \$17 billion to \$35 billion.
- The benefits of meeting the revised 24-hour PM_{2.5} standards include the value of an estimated reduction in:
 - 2,500 premature deaths in people with heart or lung disease.
 - 2,600 cases of chronic bronchitis.
 - 5,000 nonfatal heart attacks,
 - 1,630 hospital admissions for cardiovascular or respiratory symptoms,
 - 1,200 emergency room visits for asthma,
 - 7,300 cases of acute bronchitis,
 - 97,000 cases of upper and lower respiratory symptoms,
 - 51,000 cases of aggravated asthma,
 - 350,000 days when people miss work or school, and
 - 2 million days when people must restrict their activities because of particle pollution-related symptoms.
- As with any scientific analysis, actual results could be higher or lower. EPA will outline the uncertainties inherent in these estimates in a Regulatory Impact Analysis, which the Agency will issue shortly.
- EPA estimates the cost of meeting the revised 24-hour PM 2.5 standards at \$6 billion.
- The benefits of meeting the revised 24-hour standards are in addition to the benefits of meeting the 1997 annual fine particles standards, which EPA has retained.
- Based on recently updated estimates, meeting the annual standard will result in benefits ranging from \$20 billion to \$160 billion a year in 2015. These updated estimates include the opinion of outside experts on the risk of premature death, along with other benefits information. EPA estimates the cost of meeting the 1997 standards at \$7 billion.

BACKGROUND ON THE STANDARDS REVIEW

- The Clean Air Act directs EPA to set National Ambient Air Quality Standards for pollutants that the Agency has listed as “criteria pollutants,” based on their likelihood of harming public health and welfare. EPA sets national air quality standards for six common air pollutants: ground-level ozone (smog), carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, and particulate matter.
- For each of these pollutants, EPA has set health-based or "primary" standards to protect public health, and "secondary" standards to protect the public welfare from harm to crops, vegetation, wildlife, buildings and national monuments, and visibility.
- The Clean Air Act requires EPA to review the standards once every five years to determine whether revisions to the standards are appropriate.
- EPA has regulated particulate matter since 1971. The Agency added specific standards for fine particles following its last review, in 1997.
- Under terms of a consent decree, EPA agreed to issue a proposal on the particulate matter standards by December 20, 2005; and committed to finalizing any revisions to the standards by September 27, 2006.
- The review of a standard begins with an assessment of science about the particular pollutant and its effects on public health and welfare. EPA’s National Center for Environmental Assessment undertakes an extensive scientific and technical assessment process during the standard review for any pollutant. The first step in the process is the preparation of an "Air Quality Criteria Document," an extensive assessment of scientific data pertaining to the health and environmental effects associated with the pollutant under review.
- EPA’s Office of Air Quality Planning and Standards then prepares a document (known as a "staff paper") that interprets the most relevant information in the "criteria document" and identifies: 1) factors EPA staff believes should be considered in the standard review; 2) uncertainties in the scientific data; and 3) ranges of alternative standards the staff believes should be considered. Technical staff then compiles a paper that outlines the policy implications of the science. This paper represents the views of the staff and, in final form, is ultimately used as the basis for staff recommendations to the EPA Administrator.
- Drafts of both the "criteria document" and the "staff paper," which are based on thousands of peer-reviewed scientific studies, receive extensive review by representatives of the scientific community, industry, public interest groups and the public, as well as the Clean Air Scientific Advisory Committee (CASAC) -- a group of independent scientific and technical experts established by Congress.
- As part of its mandate, CASAC makes recommendations to EPA on the adequacy of the existing standards and revisions it believes would be appropriate. Based on the scientific

assessments, and taking into account the recommendations of CASAC and public comments, the EPA Administrator must judge whether it is appropriate to propose revisions to the standards.

- EPA undertakes an extensive public review and comment process, considering and analyzing issues raised in public comments before announcing a final decision. As with every proposed and final rule, all other relevant federal agencies are given the opportunity to participate in the process.
- The law requires that the EPA Administrator set the primary standards at a level he judges to be “requisite to protect the public health with an adequate margin of safety” and establish secondary standards that are “requisite” to protect public welfare. The Clean Air Act defines welfare as including environmental effects such as visibility impairment, damage to crops and ecosystems, deterioration of manmade materials, among others.
- The Clean Air Act bars the Administrator from considering costs when setting the standards. The U.S. Supreme Court upheld this requirement in a 2001 decision.

FOR MORE INFORMATION

- Interested parties can download the notice from EPA's Web site at:
<http://www.epa.gov/air/particles/actions.html>