

May 19, 2009

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: John Kross, Queen Creek, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Tuesday, May 26, 2009 - 1:30 p.m.  
MAG Office, Suite 200 - Saguaro Room  
302 North 1<sup>st</sup> Avenue, Phoenix

A meeting of the MAG Air Quality Technical Advisory Committee has been scheduled for the time and place noted above. Members of the Air Quality Technical Advisory Committee may attend the meeting either in person, by videoconference or by telephone conference call. Those attending by videoconference must notify the MAG site three business days prior to the meeting. If you have any questions regarding the meeting, please contact Chair Kross or Lindy Bauer at 602-254-6300.

Please park in the garage underneath the building, bring your ticket, and parking will be validated. For those using transit, Valley Metro/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.

In 1996, the Regional Council approved a simple majority quorum for all MAG advisory committees. If the MAG Air Quality Technical Advisory Committee does not meet the quorum requirement, members who arrived at the meeting will be instructed a legal meeting cannot occur and subsequently be dismissed. Your attendance at the meeting is strongly encouraged. If you are unable to attend the meeting, please make arrangements for a proxy from your entity to represent you.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Stephens at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

## 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.

3. Approval of the April 30, 2009 Meeting Minutes

4. Evaluation of Proposed CMAQ Projects for the Federal Fiscal Year 2009 Interim Year End Closeout

An evaluation of proposed Congestion Mitigation and Air Quality Improvement Projects submitted for Federal FY 2009 Interim Year End Closeout has been conducted. By May 6, 2009, fifty-six projects were submitted. The proposed projects are listed in order of cost effectiveness based on the total CMAQ funds for the project. The results will be presented for a possible recommendation to forward the evaluation to the MAG Transportation Review Committee for use in prioritizing projects.

In addition, Air Quality Projects are also provided. It is requested that the Air Quality

2. For information.

3. Review and approve the April 30, 2009 meeting minutes.

4. For information, discussion and possible recommendation to forward the CMAQ evaluation to the MAG Transportation Review Committee for use in prioritizing projects. In addition, forward the Air Quality Projects to the MAG Transportation Review Committee for the May 28, 2009 meeting.

Projects be forwarded to the Transportation Review Committee for the May 28, 2009 meeting. Please refer to the enclosed material.

5. Valley Telework and Ozone Alert Program Update

In 1998, the Regional Public Transportation Authority (RPTA) established the Valley Telework Project to provide telework promotional activities and telework technical assistance to public agencies and private businesses.

Telework is one of many trip reduction measures used to reduce ozone pollution. The RPTA will give an update on the Valley Telework Project and Ozone Alert Program for this ozone season.

6. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for Thursday, June 25, 2009 at 1:30 p.m. The Chairman will invite the Committee members to suggest future agenda items.

5. For information and discussion.

6. For information and discussion.

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

Thursday, April 30, 2009  
MAG Office  
Phoenix, Arizona

MEMBERS ATTENDING

John Kross, Town of Queen Creek, Chairman  
Sue McDermott, Avondale  
Elizabeth Biggins-Ramer, Buckeye

#Jim Weiss, Chandler

#Jamie McCullough, El Mirage

Kurt Sharp for Tami Ryall, Gilbert  
Doug Kukino, Glendale

Mario Saldamando for James Nichols, Goodyear  
Scott Bouchie, Mesa

Joe Gibbs for Gaye Knight, Phoenix

#Larry Person, Scottsdale

#Cathy Rudder for Antonio DeLaCruz, Surprise  
Oddvar Tveit, Tempe

\*Mark Hannah, Youngtown

\*Walter Bouchard, Citizen Representative

\*Corey Woods, American Lung Association of Arizona

#Wendy Crites for Barbara Sprungl, Salt River Project

\*Brian O'Donnell, Southwest Gas Corporation

Mark Hajduk, Arizona Public Service Company

#Gina Grey, Western States Petroleum Association

\*Valley Metro/RPTA

\*Dave Berry, Arizona Motor Transport Association

Jeannette Fish, Maricopa County Farm Bureau

\*Russell Bowers, Arizona Rock Products Association

\*Greater Phoenix Chamber of Commerce

Amanda McGennis, Associated General  
Contractors

\*Spencer Kamps, Homebuilders Association of  
Central Arizona

Mannie Carpenter, Valley Forward

Erin Taylor, University of Arizona Cooperative  
Extension

#Beverly Chenausky, Arizona Department of  
Transportation

Diane Arnst, 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

#Christopher Horan, 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

Patrisia Magallon, Maricopa Association of  
Governments

Julie Hoffman, Maricopa Association of Governments

Randy Sedlacek, Maricopa Association of Governments

Cathy Arthur, Maricopa Association of Governments

Cammy Wagner, Riester

Lawrence Odle, Maricopa County Air Quality  
Department

Heather Hodgman, City of Apache Junction

Holly Ward, Maricopa County Air Quality  
Department

Frank Schinzel, Maricopa County Air Quality  
Department

Mark Young, Queen Creek

Michelle Wilson, City of Glendale

Scott DiBiase, Pinal County

Russell Van Leuven, AZ Department of Agriculture

Leonard Montenegro, Arizona Department of  
Environmental Quality

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on April 30, 2009. John Kross, Town of Queen Creek, Chair, called the meeting to order at approximately 1:31 p.m. Jamie McCullough, City of El Mirage; Jim Weiss, City of Chandler; Chris Horan, Salt River Pima-Maricopa Indian Community; Beverly Chenausky, Arizona Department of Transportation; Wendy Crites, Salt River Project; Larry Person, City of Scottsdale; Gina Grey, Western States Petroleum Association; and Cathy Rudder, City of Surprise, attended the meeting via telephone conference call.

2. Call to the Audience

Mr. Kross 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 tables adjacent to the doorways 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. He noted that no public comment cards had been received.

3. Approval of the February 26, 2009 Meeting Minutes

The Committee reviewed the minutes from the February 26, 2009 meeting. Doug Kukino, City of Glendale, moved and Amanda McGennis, Associated General Contractors, seconded and the motion to approve the February 26, 2009 meeting minutes carried unanimously.

4. Eight-Hour Ozone Nonattainment Area Boundary Recommended by the Governor

Lindy Bauer, Maricopa Association of Governments (MAG), provided a briefing on the Eight-Hour Ozone Nonattainment Area Boundary recommended by the Governor. She stated that the Governor recommended the revised boundary to the Environmental Protection Agency (EPA) on March 12, 2009. Ms. Bauer added that the same boundary was presented to the MAG Air Quality Technical Advisory Committee on February 26, 2009.

Ms. Bauer indicated that on February 12, 2009, the Arizona Department of Environmental Quality (ADEQ) presented a Strawman Option which was supported by the MAG Regional Council on February 25, 2009. Ms. Bauer mentioned that the Governor recommended the same boundary that was supported by the MAG Regional Council and originally put forward by ADEQ. She presented the Eight-Hour Ozone Nonattainment Area Boundary. Ms. Bauer indicated that the current boundary was minimally expanded to include the Harquahala Power Generating Station to the west, the Gila River Power Station to the southwest, and the proposed Salt River Project (SRP) Abel Facility and the violating Queen Valley monitor to the southeast. She provided a schedule for the Eight-Hour Ozone Boundary designation. Ms. Bauer stated that EPA will notify areas of modifications to their recommendations by November 12, 2009. She indicated that EPA will finalize the boundaries by March 12, 2010 and it is anticipated that new air quality plans will be due in 2013. Ms. Bauer noted that the boundary is for the new eight-hour ozone standard of .075 parts per million.

5. Maricopa County Clean Air Initiative

Lawrence Odle, Maricopa County Air Quality Department, introduced the Maricopa County Clean Air Initiative. He stated that Maricopa County has been giving this presentation to many cities in the area. Mr. Odle indicated that we all contribute to air pollution and are all part of the solution. He stated that the County is expending a large amount of resources in terms of expanding the public education and outreach program to the cities, stakeholders, public entities and nonprofit organizations. Mr. Odle

indicated that the Maricopa County Air Quality Department is looking for the support of these organizations in two ways: 1) to make the clean air commitment and recognize that they are part of the solution; and 2) obtain clean air ambassadors for the program to help the County in getting the information out. He stated that air pollution is not new. Mr. Odle mentioned King Henry the 8<sup>th</sup> who made the proclamation: “who so ever shall be found burning coal within the sound of my voice shall suffer the loss of his head.” He indicated that this statement shows that air pollution has been an important issue for quite some time. Mr. Odle commented on the Donora, Pennsylvania air quality issue in 1948 and the London’s Killer Fog of 1952, which is where the term “smog” originated. He mentioned that these two incidences are examples of large scale stagnation in meteorological conditions and the visible dramatic impacts on the public. Mr. Odle indicated that Maricopa County has approximately 300,000 asthmatics in the County that on a day-to-day basis have to deal with particulate pollution and ozone.

Holly Ward, Maricopa County Air Quality Department, discussed the Maricopa County Clean Air Initiative. She presented the PM-10 exceedances in Maricopa County since 2006. Ms. Ward noted that ADEQ has submitted exceptional events to EPA. She added that once the exceptional events are approved, the region would have one exceedance day for 2007 and one exceedance day for 2008. Ms. Ward discussed the PM-10 standard and the consequences of not meeting the standard. She mentioned the financial impact on transportation project funding as well as the tougher rules for those in industry and homeowners if the PM-10 standard is not met. Ms. Ward emphasized that air pollution causes adverse health impacts on the public.

Ms. Ward presented the 2007 PM-10 emissions with committed control measures. She noted that the Committee is more familiar with the pie chart of the 2010 PM-10 emissions with committed control measures. Ms. Ward stated that the County is working to achieve its committed measures in the Five Percent Plan for PM-10. She added that the County is conducting a countywide outreach/public education effort and will be increasing its training. She introduced Frank Schinzel, Maricopa County Air Quality Department Dust Inspector and City/Town Liaison. Ms. Ward stated that Mr. Schinzel is available to help with rules, training, enforcement, etcetra. She commented that the County will also be strengthening and revising rules and ordinances. In addition, the County is creating an Advisory Committee and would like to have representation from the municipalities, community groups and industry associations to help with an Advisory Committee Process.

Ms. Ward stated that Maricopa County has ambitious goals which include decreasing the number of days the region exceeds the standard, engaging everyone to take action, reducing particulate pollution emissions by five percent each year until the standard is attained, and meeting the requirements in Senate Bill 1552. She mentioned a workshop that was held in February where the cities and towns discussed their issues and recommendations. The discussion included training, dust palliatives, resources, equipment sharing, public outreach and enforcement. Ms. Ward stated that the County has worked on a summary to the workshop and will be providing it to the city/town representatives who were in attendance.

Ms. Ward discussed the revised eight-hour ozone standard. She stated that the Maricopa County monitors exceeded 18 times in 2008. Ms. Ward added that the region would not have had any exceedances in 2008 under the old standard. She mentioned public outreach efforts to help decrease ozone pollution. Ms. Ward discussed the air monitoring van and indicated that the County is taking the van out to city and town councils when presenting its campaign. She mentioned that the community, council members, and staff are welcome to walk through the van. Ms. Ward stated that

staff is present to explain what the van does and what it can measure. Ms. Ward added that the County would entertain invitations from anyone that may be interested in having the van come to their area.

Ms. Ward indicated that the Maricopa County Air Quality Department has given a great deal of resources to a public outreach campaign. She mentioned the old campaign and stated that the County took the initiative from that campaign and turned it into a positive, take action outreach effort. Ms. Ward stated that the County has transitioned the slogan into Clean Air Make More. She added that the Clean Air Make More Campaign includes action items for people to follow. Ms. Ward commented that the Maricopa County Air Quality Department is spreading the message through outdoor high pollution advisory (HPA) billboards, radio ads, brochures, pens, flyers, local events and community presentations. She indicated that the County has also increased health watch and HPA callings to include a no burn day. In the past a no burn day would be called on just an HPA day. Ms. Ward mentioned that Mr. Odle has encouraged the County to issue a no burn day on a health watch day as well as an HPA day.

Mr. Ward discussed the Clean Air Make More website. She stated that the website offers interactive tools including a widget that can provide the current air quality status. Ms. Ward added that the widget pulls data from the 23 monitoring sites in Maricopa County. She indicated that the widget has three restriction icons that will turn red to indicate a no burn day, no use of leaf blowers on government property or off-highway vehicles on that day. The widget educates people of when inspectors will be out enforcing the restrictions. Ms. Ward noted that more information can be found on the web page by clicking on the icons.

Ms. Ward stated that policymakers, stakeholders, industry and the general public are needed to help with the outreach campaign message. She indicated that we all contribute to the pollution problem and therefore everyone will have to step in and take action. Mr. Ward added that the County is requesting that the Committee help in the cause and be a Clean Air Champion and local expert. She indicated that the Maricopa County Air Quality Department offers its campaign to help promote the message. Ms. Ward mentioned that the County is interested in changing behavior and getting people to take action so that the monitors do not exceed the standard. She commented that the County proposes for everyone to get involved by adding the Clean Air Make More link to their websites. Ms. Ward stated that the Maricopa County Air Quality Department is asking Committee members to designate a Clean Air Make More Ambassador that can help the County get the message out through items such as newsletters, mailings and Channel 11. She added that the County hopes that all the Committee members make the clean air commitment by signing up on the Clean Air Make More website, [www.cleanairmakemore.com](http://www.cleanairmakemore.com).

Mr. Odle stated that he has been in this business since 1971 and has had a chance to implement programs of various sizes. He added that this region is one of the more unique areas in the nation because of its growth, economic challenges, the structure of the inventory, as well as being a nonattainment area for particulates. Mr. Odle indicated that there has been changes made to the Maricopa County Air Quality Department. He mentioned that the County has created an ombudsman office. Mr. Odle commented that the mobile air monitoring van was approximately \$1.3 million and will be in the field by the end of the summer. He stated that the County now has the ability to get samples from odor complaints and identify the toxics with the mobile air monitoring van. Mr. Odle encouraged the Committee members to have their city councils invite the County out to display the mobile air monitoring van. He added that the County has already met with some of the city councils and it has been very successful.

Mr. Odle discussed the enforcement process. He indicated that there has been a change in the policy and the way that the program is being administered. Mr. Odle added that EPA's structure is set up to encourage penalties in the dollar value approach. He mentioned that EPA focuses on larger violation issues; discretionary non-enforcement is used for smaller violations. Mr. Odle indicated that the County is looking for conduct change. He stated that the enforcement settlements will begin to incorporate more accent and emphasis on conduct change than on the actual dollar penalty value. Mr. Odle added that the Maricopa County Air Quality Department did receive approximately \$4 to \$5 million in penalties this year. He mentioned that some of the funds will be sidelined to help set up activities for individual cities and purchase equipment that is necessary in the process. Mr. Odle stated that the County has gone through a 52 position reduction in force. He indicated that in October 2008, the County had a \$5.5 million budget deficit; however, the fund balance on June 30, 2009 will be approximately \$4 million ahead. Mr. Odle discussed new County policies including the kids club. He encouraged the Committee members to contact the Maricopa County Air Quality Department with any suggestions or recommendations.

Larry Person, City of Scottsdale, inquired if the County has studied the continuity or disconnect between the air quality watches and warnings and actual exceedances. He asked if the region has had a warning before each of the exceedances or have they been a surprise. Mr. Odle responded that the Maricopa County Air Quality Department has been looking into that area. He added that all of the days exceeding the standard are incorporated into the HPA days; however, not all of the HPA days resulted in exceedances of the standard. Mr. Odle mentioned that the County will be facing another challenge with the new ozone standard. He discussed the designation of HPA days. Mr. Odle indicated that the County has been fairly good at incorporating all of the days that exceeded the standard into the HPA days.

Mr. Kross inquired if the cities and towns have been receptive to hearing the County presentation. Mr. Odle replied that the County has had a lot of success in getting out to the community. He mentioned the City of Mesa and Town of Guadalupe and the success, progress and welcomeness received from those cities. Mr. Odle stated that there was one locale that initially rejected the offer; however, the Maricopa County Air Quality Department will continue to work with them through the process. He mentioned that the County is finding the need to build a relationship with the cities before involving them in the regulatory development process. Mr. Odle added that presenting at the various cities and towns is an opportunity to create that relationship. He discussed the city/town workshop and stated that there was good attendance. Mr. Odle added that the intention of the workshop was for the city and town representatives to tell the County how to work with them and make progress.

Mr. Kross inquired if the private sector has been receptive in hearing the presentation. Mr. Odle responded that the jury is still out. He added that the private sector is expecting some additional policies from the County which are currently in development. Mr. Odle noted that some of the policies take several months and the County had a fiscal challenge that took priority. He thanked Ms. Bauer for her assistance in resolving a Trip Reduction Program fund issue. Mr. Odle commented that the County became fiscally smart after learning that ADEQ was going to cut the funds. He mentioned that the County was able to resolve the issue through the assistance of MAG and others. Mr. Odle indicated that stakeholders are looking for changes. He added that the County wants to be strategic and calculated on how it goes about conducting the changes in the process. Mr. Odle added that approximately 50 presentations have been given before a variety of stakeholder groups and many more are planned. Mr. Kross inquired about the training. Mr. Odle responded that the training is not part of the initial outreach; however, the County is offering free training to the cities and towns.

6. Court Ruling on the EPA Exceptional Events Rule and the Implications for High Wind Events, Flagging, and Concurrences

Ms. Bauer provided an overview of the court ruling on the EPA exceptional events rule and the implications for high wind events, flagging, and concurrences. She stated that a copy of the ruling from the U.S. Court of Appeals for the D.C. Circuit has been provided to the Committee. Ms. Bauer indicated that the court upheld EPA's exceptional events rule which is important since this region has experienced exceptional and natural events for PM-10. Ms. Bauer stated that ADEQ has been doing an excellent job in flagging the data. She noted that the court found that the challenge portion of the lawsuit to the high wind events was not ripe at this point in time. Ms. Bauer mentioned that the court indicates that judicial review will be available once EPA designates an area as attainment and it has approved some of the exceptional events. There will then be an opportunity to question whether an area should be designated to attainment. Ms. Bauer added that in discussing the issue with EPA, the flagging of the data, the timing of submitting the flagged data and the County quality-assuring the data is very critical. Ms. Bauer indicated that EPA may have a situation where it is going to take action on a plan; however, the data has not been submitted in time to be flagged. She stated that ADEQ has been looking at how quickly the data can be flagged since it is very important for this region. Ms. Bauer noted that there has been several days flagged due to the high winds in the region as well as in Pinal County.

Mannie Carpenter, Valley Forward, inquired if there was only one exceedance in 2007 and one in 2008 that were not flagged as natural events. Ms. Bauer responded that is correct. She stated that for PM-10, no more than three exceedances per monitor over a three year time period is allowed. She added that MAG is hoping to have that kind of record for 2008, 2009 and 2010 for the MAG Five Percent Plan for PM-10.

7. New Draft EPA Mobile Source Emissions Model

Cathy Arthur, MAG, provided a briefing on the new draft EPA mobile source emissions model. She stated that the MOVES model is the MOtor Vehicle Emissions Simulator that was recently released in draft form by EPA. She added that this is the next generation that will replace the MOBILE model and eventually the NONROAD model. Ms. Arthur indicated that the MOVES model will be addressing mobile sources that are onroad and offroad; however, initially it will only provide the onroad emission factors. Ms. Arthur mentioned that comments are due to EPA by July 2009 and EPA plans to release the MOVES model by the end of the year. She stated that EPA training has been tentatively scheduled in Phoenix on May 27<sup>th</sup> and 28<sup>th</sup>.

Ms. Arthur stated that the MOVES model is currently in draft form for review by the individuals and metropolitan planning organizations (MPOs) that will be using it. She mentioned that MOVES will be the official EPA emissions model once it is released in non-draft form. Ms. Arthur indicated that EPA may allow between 3 and 24 months as a grace period for use of the model. She added that EPA will likely allow the full 24 months since it is such a major transition. Ms. Arthur stated that the model will be required after that 24 month period for all conformity analyses, State Implementation Plan revisions and other uses.

Ms. Arthur discussed the differences between the MOVES and MOBILE models. She mentioned that the MOVES model has a graphical user interface and a database structure. Ms. Arthur added that the emissions rates are primarily based on data collected since the MOBILE model was last released in 2003. Ms. Arthur stated that the sources for the data include a major study conducted in Kansas City

which looked at particulate matter exhaust emissions from light duty vehicles. Ms. Arthur added that there has been a lot of focus on heavy duty vehicle emission rates since 2003 which have been improved in the MOVES model. She indicated that EPA looked at 100 vehicles in use at the University of West Virginia and on-board driving data for an additional 300 heavy duty vehicles.

Ms. Arthur discussed the emission rates being different between the two models. She mentioned that EPA had four different states use their local data for testing of the model before it was released in draft form in early April. Ms. Arthur indicated that the consistent results found in the four states were that the nitrogen oxide (NO<sub>x</sub>) emissions were approximately one-third higher than the MOBILE model. She stated that values tripled for PM-2.5 and the volatile organic compound (VOC) emissions were slightly lower with the MOVES model. Ms. Arthur added that if the NO<sub>x</sub> emissions are higher in the MOVES test runs for this region, MAG may need to remodel the attainment and maintenance demonstrations for the eight-hour ozone standard of 0.080 parts per million in order to create conformity budgets for NO<sub>x</sub> and VOC emissions. In addition, MAG may need to remodel the Five Percent Plan for PM-10 and establish new conformity budgets for NO<sub>x</sub> and VOCs if the PM-2.5 emissions are considerably higher with the new model. Ms. Arthur noted that this is all contingent upon using local data and finding these same results. She mentioned that the Congestion Mitigation and Air Quality Improvement (CMAQ) methodologies would also have to be revised to reflect the new speed sensitivity of PM-10 in the MOVES model.

Ms. Arthur stated that the MOVES model was downloaded on April 10, 2009 and MAG staff is currently reviewing the two technical manuals. She added that software interfaces between the MAG travel demand models and the new MOVES model will be developed. Ms. Arthur indicated that data inputs are different; therefore, the MOBILE6 inputs will need to be converted to a format compatible with the MOVES model. She stated that local data will also be tested and it is anticipated that these steps will be accomplished before July in order to provide comments to EPA. Ms. Arthur mentioned that MAG will continue to update the Committee on the MOVES model.

Mr. Carpenter inquired about the model being applicable outside California. Ms. Arthur responded that California has its own model called EmFAC. She added that California has different emission standards for its vehicles; therefore, they have conducted their own studies to develop the emission factors for California vehicles and in the process, developed their own model. She mentioned that California has been exempted from using the MOVES model since it has its own EPA-approved model.

Mr. Carpenter inquired if PM-10 and PM-2.5 are tailpipe emissions. Ms. Arthur responded that the emissions are not strictly from tailpipes. She added that the PM-10 output by the MOVES model includes tire wear and brake wear as well as exhaust emissions. Ms. Arthur indicated that re-entrained PM-10 due to vehicles traveling on paved roads is estimated with a different AP-42 equation that is not addressed by MOVES. Mr. Carpenter asked how PM-10 in MOVES compares to MOBILE6. Ms. Arthur replied that the test for PM-10 was not provided; however, PM-2.5 is the biggest component of exhaust PM-10. She added that if PM-2.5 is tripling in the MOVES model then there may be an impact on PM-10. Ms. Arthur noted, however, that the vehicle exhaust emissions are less than two percent in the PM-10 emissions inventory. She mentioned that it is unknown at this time if there will be an impact on the conformity budget since PM-2.5 emissions are a small proportion of the total budget.

Mark Hajduk, Arizona Public Service Company, inquired if the model can calculate carbon dioxide emissions. Ms. Arthur responded that the model does calculate those emissions; however, it has not yet been tested by MAG.

8. Possible Greenhouse Gas Requirements in CLEAN-TEA

Ms. Bauer provided an overview of possible greenhouse gas requirements for metropolitan planning organizations. She stated that efforts are underway to address climate change and reduce greenhouse gas emissions at the federal level. The Maricopa Association of Governments is the designated Regional Air Quality Planning Agency and the Metropolitan Planning Organization for transportation. Ms. Bauer added that both the National Association of Regional Councils and the Association of Metropolitan Planning Organizations have indicated that greenhouse gas requirements may be included in the upcoming transportation reauthorization legislation. She stated that the focus of her presentation is on transportation.

Ms. Bauer indicated that according to EPA, transportation accounts for approximately 28 percent of the carbon dioxide equivalent emissions. She noted that greenhouse gas emissions are reported in carbon dioxide equivalent emissions. Ms. Bauer mentioned that some sources of greenhouse gas emissions are more effective at global warming than carbon dioxide. Carbon dioxide equivalent emissions are used for a universal approach. She stated that the City of Phoenix has indicated that methane is 28 times more efficient as a greenhouse gas than carbon dioxide. Ms. Bauer noted that all sources have been converted to carbon dioxide equivalent emissions. She presented the sources of U.S. greenhouse gas emissions. Ms. Bauer added that transportation and electricity generation are the largest sources in the United States. The smaller sources include industry, agriculture, commercial and residential.

Ms. Bauer discussed the draft American Clean Energy and Security Act of 2009 and the key transportation provisions in the legislation. She stated that the legislation would set federal emissions standards for cars, trucks, trains and ships. Ms. Bauer indicated this would be a heavy hitting measure for carbon dioxide emissions. She stated that the legislation would also set a low-carbon fuel standard for onroad, offroad and airplanes. Ms. Bauer mentioned that EPA would be given three years to prepare regulations to reduce greenhouse gas emissions from all transportation fuels to below 2005 levels. The transportation fuel emissions would then need to decrease by at least five percent below 2005 levels each year between 2023 and 2029, and by ten percent for 2030 and later. Ms. Bauer stated that between 2014 and 2022 the average greenhouse gas emissions for fuels would be capped at the 2005 level and then fuels would need to start reducing emissions to below that level. She added that the legislation also promotes plug-in electric vehicles and infrastructure since the vehicles are zero emitting vehicles.

Ms. Bauer discussed the requirements for metropolitan planning organizations such as MAG. She stated that MPOs over 200,000 in population must submit plans to reduce transportation related greenhouse gas emissions as part of the Transportation Improvement Plan or the Regional Transportation Plan. Ms. Bauer indicated that the plans would have to be designed to achieve the goals set by the State. She mentioned that there would be a stakeholder process to set the goals and develop the plans involving State air agencies, State Departments of Transportation, MPOs 200,000 or more in population, local air and transportation agencies, as well as the public.

Ms. Bauer discussed the greenhouse gas reduction goals which include a statewide goal and goals for each MPO over 200,000 in population. She added that these goals would need to be set within three

years of enactment of the bill should it pass Congress. Ms. Bauer mentioned that the goals would apply to all mobile sources and would need to be from business as usual projections. She indicated that there would be ten and 20 year time horizons along with revisions to the goals every four years. Ms. Bauer added that the emissions are not to increase after a specified year and the bill encourages States to use 2010 as the base year.

Ms. Bauer discussed the greenhouse gas reduction plans. She stated that the plans must be updated to ensure that the Transportation Improvement Plan and Regional Transportation Plan will achieve the goal. Ms. Bauer added that the plans have to address mobile sources, economic development, and scenario analysis, likely through modeling. She indicated that there will be a public involvement component, regional coordination with the MPOs, local governments and agencies as well as consultation that is similar to what is currently in place.

Ms. Bauer discussed the strategies in the bill to reduce transportation related greenhouse gas emissions. She stated that the planning strategies include increased public transit services as well as updated zoning/land use regulations. She added that local land use authority rests with local governments and Maricopa County, which also has land use and zoning authority. Ms. Bauer indicated that if the bill is passed, MAG is thinking it would work with the local governments and the County using a process similar to the process for air quality measures. She added that the jurisdictions would be using existing authorities for these measures and subsequently providing them to MAG. Ms. Bauer indicated that there is concern over the infringement on local land use authority in the bill. She referred to the Clean Air Act, Section 131, which states that nothing in the Act shall infringe upon local land use authority. Ms. Bauer mentioned that the bill further discusses coordinating transportation and land use; focusing growth close to job centers; using existing infrastructure; promoting transit, bicycle and pedestrian travel; and promoting mixed use development.

Ms. Bauer discussed additional strategies in the American Clean Air Energy and Security Act of 2009. She mentioned the complete streets implementation for all types of users. She stated that the bill includes bicycle and pedestrian infrastructure, telecommuting, flex schedules, pricing measures and parking policies. The bill also includes the use of intermodal freight. Ms. Bauer also discussed high occupancy vehicle/bus rapid transit lanes, idling reduction measures and fleet turnover/vehicle replacement. She mentioned the enforcement mechanism in the American Clean Energy and Security Act of 2009. Ms. Bauer stated that EPA may withhold federal funds if goals or plans are not submitted; however, EPA may not withhold federal funds based on the content or adequacy of goals and plans.

Ms. Bauer then discussed the Clean Low-Emissions Affordable New Transportation Equity Act (CLEAN TEA). She indicated that this bill would require States, regional and local governments with a population over 200,000 to establish a goal of reducing transportation related greenhouse gas emissions, develop a plan with a prioritized list of projects to meet the emissions goal, integrate the plan into existing State and regional transportation plans, and evaluate greenhouse gas impacts of projects. Ms. Bauer noted that the MOVES model may be a useful tool to meet the requirements of this bill. She indicated that the projects that could be funded include transit, passenger and freight rail, biking and pedestrian improvements, vanpool and telecommuting, and land use changes to make communities more walkable.

Ms. Bauer stated that a number of progressive efforts are underway in this region. She mentioned that the City of Phoenix has completed an inventory of its own facilities regarding greenhouse gas emissions and has a climate action plan. Ms. Bauer added that the City of Phoenix recently sent

ECotality and Nissan to talk to MAG and as a result MAG is partnering with them to develop the infrastructure needed for electric vehicles. She noted that electric vehicles are zero emitting. Ms. Bauer stated that the Pima Association of Governments is also working in partnership with Nissan. In addition, many of the cities have transit oriented development within their plans. She indicated that many of the items listed in the bills are very much underway within the MAG region. Ms. Bauer stated that the air quality plans also have measures to reduce vehicle miles of travel such as the Rideshare Program, the Maricopa County Trip Reduction Program, transit, carpooling and vanpooling. In addition, MAG will be performing some modeling to see how the region compares to the 2005 levels for carbon dioxide emissions. She added that on April 17, 2009, EPA issued a proposed finding that greenhouse gases may harm public health and welfare. Ms. Bauer mentioned that this is EPA's proposed endangerment finding which would allow EPA to regulate greenhouse gas emissions under the Clean Air Act if the endangerment finding becomes final.

Mr. Person inquired if EPA will be the enforcing agency. Ms. Bauer responded that at this time, it appears EPA will be the enforcing agency; however, it is draft legislation. She added that it is yet to be seen what comes out of Congress. Mr. Person asked if MAG is taking an official position in the sense of having a national lobbyist as the bill makes its way through Congress. Ms. Bauer replied that MAG is a member of the National Association of Regional Councils which seeks input from all the Regional Councils across the country. In addition, MAG often uses the city lobbyists that work for the cities and towns. She added that MAG has no official position at this point and is simply monitoring the bills and how they will impact the region. Mr. Person inquired if MAG has contacted the Scottsdale lobbyist. Ms. Bauer responded that MAG has not contacted the Scottsdale lobbyist regarding this issue.

Mr. Kross inquired if there would be additional funding through the Transportation Act for those who will be preparing the plans. Ms. Bauer responded that CLEAN-TEA includes a list of projects that could be funded. She added that there are some rumors indicating that the CMAQ category of funding may be broadened to include greenhouse gas emission reductions; however, it is too early to tell at this point in time. Mr. Kross referred to the land use strategy and asked if it is anticipated that the issue with the Clean Air Act would be reconciled. He inquired if there has been any early consideration. Ms. Bauer replied that MAG has not heard of any consideration; however, MAG wanted to point out Section 131 of the Clean Air Act which protects local land use authority.

Mr. Carpenter referred to the American Clean Energy and Security Act. He inquired if the ten percent emission reductions for 2030 and later was per year or cumulative. Ms. Bauer responded that the ten percent reductions appear to be starting in the year 2030.

Mr. Hajduk mentioned the EPA endangerment finding and the promulgation of standards under the Clean Air Act Section 202(a). He inquired about how the standards will impact the region. Ms. Bauer replied that MAG is looking at the standards in California and what the impact would be on the region. She added that the concern is that the region is a growth area. Ms. Bauer stated that if EPA promulgates a standard for vehicles to reduce carbon dioxide, we will need to determine if the emissions would be coming down enough to offset the growth in the region. She mentioned that MAG will be looking into this issue.

Mr. Hajduk stated that the endangerment finding will not only impact mobile emissions but stationary emissions as well. He added that right now the focus is on motor vehicles; however, eventually it will move to other aspects. Mr. Hajduk mentioned EPA moving forward with the standards and the bills

coming through legislation. He stated that it is difficult to determine the impacts. Ms. Bauer agreed and stated that the presentation focused only on the transportation provisions.

Mr. Kross inquired about the agreement between MAG, Nissan and ECOtality. Ms. Bauer responded that the City of Phoenix asked MAG to talk with Nissan about the project. Mr. Person asked that the handouts be provided for those attending by telephone. Ms. Bauer responded that MAG staff will email the handouts to the members attending by telephone.

9. Call for Future Agenda Items

Mr. Carpenter inquired if the region is in a position to start taking action on ozone since the Governor has made a recommendation on the boundary. Ms. Bauer responded that the MAG Unified Planning Work Program and Annual Budget will be going through the MAG Regional Council in May for approval and includes initiating the efforts to prepare an eight hour ozone plan for the .075 parts per million ozone standard. She indicated that MAG will begin by developing a modeling protocol, determining the base year, and working with the County on emission inventories.

Ms. Arnst mentioned having the consolidated report on the Five Percent Plan for PM-10 implementation tracking on the agenda for a future meeting. She inquired if the next Committee meeting will be held the week of Memorial Day. Ms. Bauer responded that the meeting would be held the day after Memorial Day, which is a Tuesday. She added that the meeting will take place on this day due to the process for the evaluation of CMAQ projects for closeout. Ms. Bauer stated that the timing for the May meeting has to coincide with the May MAG Transportation Review Committee (TRC) meeting since the recommendation of this Committee would go to the TRC. Ms. Arnst inquired about a quorum. Ms. Bauer responded that a quorum is necessary in order for the Committee to take action.

Mr. Kross announced that the next meeting of the Committee has been tentatively scheduled for May 26, 2009 at 1:30 p.m. With no further comments, the meeting was adjourned at 2:39 p.m.



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May 19, 2009

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Dean Giles, Air Quality Planning Program Specialist

SUBJECT: EVALUATION OF PROPOSED CMAQ PROJECTS FOR THE FEDERAL FISCAL YEAR 2009 INTERIM YEAR END CLOSEOUT

The Maricopa Association of Governments has conducted an evaluation of proposed Congestion Mitigation and Air Quality Improvement projects submitted for the Federal Fiscal Year 2009 Interim Year End Closeout. The results of the project evaluation are provided in Attachment A ranked by cost-effectiveness based on the total CMAQ funds for the project. This information is being presented to the MAG Air Quality Technical Advisory Committee for a possible recommendation to forward the Congestion Mitigation and Air Quality Improvement (CMAQ) evaluation to the MAG Transportation Review Committee for use in prioritizing projects. In addition, the Air Quality Projects provided in Attachment B may also be forwarded to the Transportation Review Committee for their May 28, 2009 meeting.

### PROJECT EVALUATION

As of May 19, 2009, member agencies submitted requests to defer or delete federal funds from projects for approximately \$13.7 million. By May 6, 2009, fifty-six projects requesting approximately \$64.2 million were submitted for evaluation for estimated emissions reduction and cost-effectiveness based on the total CMAQ funds for the projects.

In accordance with CMAQ guidance, MAG staff evaluated the projects for the estimated emissions reductions benefits and calculated the cost-effectiveness using the CMAQ methodologies, when possible. Beginning in 1999, MAG developed and applied methodologies for assessing emission reduction benefits for proposed CMAQ projects in accordance with federal guidance for the CMAQ Program. The latest version of the CMAQ methodologies is dated April 16, 2009.

The projects have been ranked in order from most cost-effective to least cost-effective in the attachments. In general, the methodologies for calculating cost-effectiveness involve the estimation of emissions reductions for total organic gases (TOG), nitrogen oxides (NOx), and PM-10, measured in kilograms per day. The annualized cost-effectiveness of each project is measured in CMAQ dollars per metric ton of total emissions reduced.

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

The Environmental Protection Agency MOBILE6.2 emission model was used to estimate TOG and NOx exhaust emission factors, and PM-10 exhaust, tire wear, and brake wear emission factors, for the implementation year of the project. The emission factors from the EPA AP-42 guidance were used to estimate reentrained PM-10 emissions on paved and unpaved roads, where appropriate.

The purpose of the CMAQ Program is to provide federal funding for transportation-related projects and programs designed to assist nonattainment and maintenance areas in complying with federal air quality standards. On October 20, 2008, the Federal Highway Administration published Final Guidance on the Congestion Mitigation and Air Quality Improvement Program that incorporates Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU) provisions. A CMAQ fact sheet is enclosed.

The evaluation of proposed CMAQ projects for the Federal FY 2009 Interim Year End Closeout in the attachment is being presented to the MAG Air Quality Technical Advisory Committee (AQTAC) for a possible recommendation to forward the air quality evaluations to the MAG Transportation Review Committee (TRC) for use in prioritizing projects for funding. Consistent with the FY 2009 Draft MAG Federal Fund Programming Principles, a description of the role of the AQTAC in the Congestion Mitigation and Air Quality Improvement Project Evaluation Process is enclosed. In addition, the Air Quality Projects may also be forwarded by the Air Quality Technical Advisory Committee to the TRC. If you have any questions or need additional information, please contact me at (602) 254-6300.

Attachments

PROPOSED CMAQ PROJECTS FOR THE FEDERAL FY 2009 INTERIM YEAR END CLOSEOUT - RANKED BY COST EFFECTIVENESS

Attachment A

Agency	TIP Number	Location	Description of Work	Fiscal Year	Emissions Reduction Weighted TOG (kg/day)	Emissions Reduction Weighted NOX (kg/day)	Emissions Reduction Weighted PM-10 (kg/day)	Emissions Reduction Weighted Total (kg/day)	Cost Effectiveness (\$/metric ton) <sup>1</sup>	CMAQ Funds Requested	Notes (below)
Buckeye	BKY07-704D	Various Locations	Design paved dirt road and shoulders	2011			45.51	45.51	\$889	\$56,000	10,12
Litchfield Park	LPK08-801	Various locations	Pave unpaved alleys	2009			149.28	149.28	\$1,218	\$456,501	10
Surprise		Dove Valley Rd, 163rd to 179th Ave	Design paved unpaved road	2012			114.11	114.11	\$1,786	\$150,000	10
MAG	MAG09-614	Regionwide	Purchase PM-10 certified street sweepers	2009			313.51	313.51	\$2,002	\$1,499,414	11
Mesa	MES09-607	Various locations	Upgrade TMC equipment and purchase central components, field cameras and VMS	2009	60.83	77.93		138.76	\$2,442	\$169,950	3
Phoenix	PHX07-741	Various Locations	Pave dirt shoulders	2009			94.46	94.46	\$3,412	\$875,000	12
Glendale	GLN11-704	Maryland Avenue from 67 <sup>th</sup> Ave. to 69 <sup>th</sup> Ave. and 79 <sup>th</sup> Ave. to 83 <sup>rd</sup> Ave	Design widening of roadway for a bike lane (67 <sup>th</sup> to 69 <sup>th</sup> Ave.) and a paved multi-use pathway connection to existing pathway in Discovery Park (79 <sup>th</sup> to 83 <sup>rd</sup> Ave.)	2011	0.84	0.39	3.63	4.86	\$3,786	\$100,000	5,6
Phoenix	PHX07-740	Various Locations	Pave dirt roads	2009			247.65	247.65	\$3,910	\$2,628,954	10
Glendale	NEW	Glendale TMC	Purchase a replacement traffic signal system to allow for remote control of the City's signalized intersections	2009	8.10	4.16		12.26	\$4,683	\$96,000	3,7
Tempe	TMP12-804	Citywide	Design and construct fiber-optic cable installations	2009	19.98	10.26		30.25	\$7,143	\$118,643	3
Glendale	NEW	Glendale TMC	Develop an ITS Strategic Plan document in line with regional ITS planning efforts	2009	9.12	4.57		13.69	\$13,108	\$300,000	3
Maricopa County	MMA09-610	Rio Verde Dr: Forest Rd to 136th St alignment	Pave shoulders to include a bicycle lane	2009	0.09	0.04	20.10	20.23	\$13,110	\$932,500	6,12
Glendale	GLN10-804T	Bell/Loop 101	Pre-design regional park-and-ride	2010	1.95	1.83	4.70	8.48	\$13,808	\$162,836	2,8
Glendale	GLN11-808T	Bell/Loop 101	Pre-design regional park-and-ride	2011	1.95	1.83	4.70	8.48	\$13,808	\$473,060	2,8
Chandler	CHN10-613	Buffalo St at Colorado St	Upgrade, retrofit and integrate TMC equipment	2009	17.57	23.59		41.16	\$14,535	\$575,000	3
Scottsdale	SCT12-813	Citywide	Acquisition of ITS signal controllers and cabinets	2009	14.03	5.09		19.12	\$14,628	\$220,946	3,7
Chandler	CHN110-07D	Chandler Blvd/Alma School	Environmental Assessment During the Design Phase	2009	0.30	0.15	0.01	0.45	\$18,244	\$45,000	9
Chandler	CHN130-07RW	Ray Rd at Alma School	Environmental Assessment During the Design Phase	2009	0.27	0.14	0.00	0.41	\$20,055	\$45,000	9

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VM Rail	NEW	Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line	Expand METRO light rail hours of service from 11:00pm on Friday and Saturday evenings to 2:00am (3 hours of additional service) on Saturday and Sunday mornings. Maintain existing 20-minute headways. Project funding request amount is to implement a 2-year pilot program to gauge late-night, weekend ridership demand. Project costs also include feeding dial-a-ride services. CMAQ eligible expense for a maximum of 3-years.	2009	1.16	1.14	2.38	4.67	\$23,640	\$600,000	4
Fountain Hills	FTH07-301	Shea Blvd: Palisades Blvd to Fountain Hills Blvd	Widen for third (westbound) climbing lane and bicycle lane	2009	0.78	0.38	15.42	16.58	\$24,028	\$1,088,000	6,12
Chandler	CHN08-802T	Arizona Ave/Germann	Construct regional park-and-ride (Loop 202/Arizona Ave.) - Phase II Construct access to park-and-ride lot along Hamilton Rd	2009	0.95	0.91	1.94	3.80	\$52,654	\$1,086,000	8
Valley Metro	VMT09-806T	Regionwide	Purchase vanpool vans - 25 replace	2009	2.36	2.21	4.82	9.39	\$64,341	\$819,550	4
Glendale	GLN08-802	Grand Canal in West Glendale from L101 to New River	Design a 1.5-mile multi-use pathway	2010	0.33	0.15	0.16	0.64	\$72,150	\$250,000	5,6
Tempe	TMP12-806	Light Rail Transit Corridor in Tempe	Install CCTV monitoring stations	2009	1.90	0.95		2.85	\$89,082	\$139,643	3
Surprise	SUR10-614	Greenway Rd: US-60 (Grand Ave) to Cotton Ln	Construct fiber optic interconnection of traffic signals, cameras and VMS	2009	2.96	3.68		6.64	\$90,156	\$500,000	3,7
Tempe	TMP09-704	Crosscut Canal from Papago Park to Mouer Park - Tempe	Design and construct multi-use path (phase II)	2009	0.66	0.30	0.29	1.25	\$104,274	\$1,221,235	5,6
Valley Metro	NEW	Regionwide	Purchase Bus - 14 replace	2009	-8.23	10.89	19.27	21.92	\$106,544	\$8,487,000	4
Surprise	SUR11-714	Bell Rd: US-60 (Grand Ave) to 114th Ave	Design, acquire right of way and construct a multi-use path	2011	0.97	0.43	0.49	1.90	\$113,965	\$175,000	5,6
Peoria	NEW	New River Trail: Northern Avenue to Olive Avenue	Construct Multi-use Path	2009	0.34	0.15	0.15	0.64	\$133,330	\$800,000	5,6
Scottsdale	SCT09-703	Cross cut Canal - Thomas Rd to Indian School Rd	Construct new multi-use path and pedestrian/bicycle bridge	2009	0.33	0.15	0.14	0.62	\$151,683	\$882,333	5,6
VM Rail	NEW	Central Phoenix/East Valley (CP/EV) 20-mile light rail transit starter line	Installation of additional METRO ticket vending machines and stand alone fare validation systems at various station platforms along the light rail alignment	2009	0.19	0.19	0.40	0.78	\$189,123	\$800,000	4
Maricopa County	NEW	MCDOT Traffic Management Center Video Wall Replacement	Replacement of the MCDOT TMC video wall including design, equipment, installation, support structure, and support costs	2009	0.26	0.14	0.00	0.41	\$324,033	\$220,000	3
Gilbert	GLB11-731	Town of Gilbert Heritage District	Design & construct sidewalks, landscaping, and other pedestrian improvements	2009	0.18	0.05	0.05	0.28	\$394,326	\$169,599	5

PROPOSED CMAQ PROJECTS FOR THE FEDERAL FY 2009 INTERIM YEAR END CLOSEOUT - RANKED BY COST EFFECTIVENESS

Attachment A

Agency	TIP Number	Location	Description of Work	Fiscal Year	Emissions Reduction Weighted TOG (kg/day)	Emissions Reduction Weighted NOX (kg/day)	Emissions Reduction Weighted PM-10 (kg/day)	Emissions Reduction Weighted Total (kg/day)	Cost Effectiveness (\$/metric ton) <sup>1</sup>	CMAQ Funds Requested	Notes (below)
Mesa	MES08-807	ITS Signal Conversions - Phase 3 (Mesa Dr. & Main St.)	Expand fiber-optic network and link 11 traffic signals to the Mesa TMC	2009	1.81	0.83		2.64	\$503,494	\$1,573,227	3,7
Mesa	MES04-125C	Country Club Dr: 8th Ave to Baseline Rd (including US-60 TI)	Install real-time adaptive signal system	2009	1.09	0.50		1.59	\$514,644	\$581,190	3,7
VM Rail	NEW	Central Phoenix/East Valley (CP/EV) 20-mile light rail transit starter line	Safety & Security components: wireless broadband for the light rail vehicle to allow for CCTV signals to be transmitted to police vehicles	2009	0.19	0.19	0.40	0.78	\$591,009	\$2,500,000	4
Chandler	CHN09-802	Chandler Blvd: Delaware St to Gilbert Rd	Install fiber-optic cable traffic signal interconnection	2009	0.28	0.14		0.43	\$632,032	\$140,347	3,7
Tempe	TMP04-102	Curry Rd: Scottsdale to McClintock	Construct bicycle and pedestrian improvements	2009	0.21	0.10	0.09	0.40	\$648,721	\$512,394	5,6
Gilbert	GLB07-302	Eastern Canal: Elliot Rd to Warner Rd (Santan Vista Trail phase III)	Design and construct multi-use path	2009	0.19	0.09	0.08	0.36	\$651,595	\$773,950	5,6
Queen Creek	QNC08-803	Queen Creek town center	Construct ITS infrastructure and traffic management system	2009	0.50	0.18		0.68	\$663,539	\$200,000	3
Gilbert	GLB06-201R	Eastern Canal: Guadalupe Rd to Elliot Rd (Santan Vista Trail phase II)	Design and construct multi-use path	2009	0.19	0.09	0.08	0.36	\$680,555	\$693,630	5,6
Tempe	TMP10-620	Broadway Rd: Rural Rd to Mill Ave	Construct pedestrian and bicycle facilities improvements	2009	0.68	0.31	0.30	1.29	\$689,497	\$2,275,768	5,6
VM Rail	NEW	Central Phoenix/East Valley: Sycamore/Main Street Park-and-Ride	Construction of shade canopies for existing park-and-ride spaces at the Sycamore / Main Street end-of-the-line station	2009	0.19	0.19	0.40	0.78	\$709,211	\$3,000,000	4
Glendale	NEW	Glendale TMC	Purchase replacement video wall and control equipment	2009	0.26	0.14	0.00	0.41	\$736,440	\$500,000	3
Tempe	TMP04-104R	Western Canal - Price Rd to AZ Mills Mall	Construct multi-use path	2009	1.09	0.50	0.47	2.05	\$802,896	\$5,608,500	5,6
Scottsdale	NEW	Arizona Canal: Chaparral Rd to Indian Bend Rd	Design for multi-use path funded in 2012 and 2013	2013	0.32	0.14	0.19	0.65	\$862,505	\$430,000	5,6
Peoria	PEO11-701	New River Trail at Olive Ave.	Acquire right of way, design and construct roadway crossings	2009	0.20	0.09	0.09	0.37	\$965,434	\$1,260,000	5,6
Maricopa County	NEW	CCTV Camera Deployment - 11 Locations	Installation of 11 CCTV cameras at existing MCDOT signals to increase traffic surveillance coverage of key MCDOT arterial corridors	2009	0.08	0.04	0.00	0.13	\$1,033,181	\$225,000	3,7
Scottsdale	SCT09-611	Scottsdale Rd: Roosevelt St to Earl Dr	Upgrade sidewalks and add bicycle lanes	2009	0.69	0.31	0.30	1.30	\$1,036,694	\$4,845,423	5,6
Gilbert	GLB05-107R	Eastern Canal: Baseline Rd to Guadalupe Rd (Santan Vista Trail phase I)	Design and construct multi-use path	2009	0.21	0.10	0.09	0.40	\$1,061,848	\$1,752,094	5,6
Surprise	SUR12-817	Bell Rd: 141st Ave to Loop 303	Design sidewalks	2012	0.07	0.02	0.02	0.12	\$1,590,995	\$125,000	5
Chandler	CHN11-710	Western Canal bike path at Dobson Rd, Alma School Rd and Arizona Ave	Install three pedestrian actuated crossing signals	2009	0.03	0.01	0.01	0.05	\$1,815,326	\$269,000	5

PROPOSED CMAQ PROJECTS FOR THE FEDERAL FY 2009 INTERIM YEAR END CLOSEOUT - RANKED BY COST EFFECTIVENESS

Agency	TIP Number	Location	Description of Work	Fiscal Year	Emissions Reduction Weighted TOG (kg/day)	Emissions Reduction Weighted NOX (kg/day)	Emissions Reduction Weighted PM-10 (kg/day)	Emissions Reduction Weighted Total (kg/day)	Cost Effectiveness (\$/metric ton) <sup>1</sup>	CMAQ Funds Requested	Notes (below)
Peoria	PEO06-202C	91st Ave at Olive Ave	Construct intersection project	2009	0.19	0.10	0.00	0.29	\$2,062,125	\$2,485,000	9
Tempe	TMP07-312	West Dam: South Bank to North Bank	Construct multi-use path	2009	0.18	0.08	0.08	0.34	\$3,309,156	\$4,379,500	5,6
Tempe	TMP08-602	College Ave:Superstition Freeway (US60) to Apache Blvd	Construct pedestrian improvements	2009	0.05	0.01	0.01	0.08	\$9,737,356	\$1,443,605	5
Peoria	PEO08-602	84th Ave: Peoria Ave to Monroe St	Design and construct at-grade pedestrian improvements	2009	0.01	0.00	0.00	0.02	\$31,057,484	\$2,445,183	5

Notes:

1. Cost effectiveness is expressed as the total CMAQ project cost (in dollars) per annual emissions reduction (in metric tons).
2. For calculating the cost effectiveness of Glendale Park & Ride projects (GLN10-804T, GLN11-808T), the CMAQ costs were combined.
3. Supports the Transportation Control Measure (TCM) in the Revised 1999 Serious Area CO Plan: "Develop Intelligent Transportation Systems."
4. Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Mass Transit Alternatives."
5. Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Encouragement of Pedestrian Travel."
6. Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Encouragement of Bicycle Travel."
- 7.Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Coordinate Traffic Signal Systems."
8. Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Park and Ride Lots."
9. Supports the TCM in the Revised MAG 1999 Serious Area CO Plan: "Reduce Traffic Congestion at Major Intersections."
- 10.Supports the measure in the 2007 Five Percent Plan for PM-10: "Pave or Stabilize Existing Public Dirt Roads and Alleys."
- 11.Supports the measure in the 2007 Five Percent Plan for PM-10: "Sweep Streets with PM-10 Certified Sweepers."
- 12.Supports the measure in the 2007 Five Percent Plan for PM-10: "Pave or Stabilize Unpaved Shoulders."

PROPOSED AIR QUALITY CMAQ PROJECTS FOR THE FEDERAL FY 2009 INTERIM YEAR END CLOSEOUT - RANKED BY COST EFFECTIVENESS

Attachment B

Agency	TIP Number	Location	Description of Work	Fiscal Year	Emissions Reduction Weighted TOG (kg/day)	Emissions Reduction Weighted NOX (kg/day)	Emissions Reduction Weighted PM-10 (kg/day)	Emissions Reduction Weighted Total (kg/day)	Cost Effectiveness (\$/metric ton) <sup>1</sup>	CMAQ Funds Requested	Notes (below)
Buckeye	BKY07-704D	Various Locations	Design paved dirt road and shoulders	2011			45.51	45.51	\$889	\$56,000	2,4
Litchfield Park	LPK08-801	Various locations	Pave unpaved alleys	2009			149.28	149.28	\$1,218	\$456,501	2
Surprise		Dove Valley Rd, 163rd to 179th Ave	Design paved unpaved road	2012			114.11	114.11	\$1,786	\$150,000	2
MAG	MAG09-614	Regionwide	Purchase PM-10 certified street sweepers	2009			313.51	313.51	\$2,002	\$1,499,414	3
Phoenix	PHX07-741	Various Locations	Pave dirt shoulders	2009			94.46	94.46	\$3,412	\$875,000	4
Phoenix	PHX07-740	Various Locations	Pave dirt roads	2009			247.65	247.65	\$3,910	\$2,628,954	2

Notes:

1. Cost effectiveness is expressed as the total CMAQ project cost (in dollars) per annual emissions reduction (in metric tons).
2. Supports the measure in the 2007 Five Percent Plan for PM-10: "Pave or Stabilize Existing Public Dirt Roads and Alleys."
3. Supports the measure in the 2007 Five Percent Plan for PM-10: "Sweep Streets with PM-10 Certified Sweepers."
4. Supports the measure in the 2007 Five Percent Plan for PM-10: "Pave or Stabilize Unpaved Shoulders."

## CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM FACT SHEET

According to the final Congestion Mitigation and Air Quality Improvement (CMAQ) Program Guidance, effective October 31, 2006, the purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards for ozone, carbon monoxide, and particulate matter. Table 1 provides a description of the 16 project categories contained in federal CMAQ guidance as well as general activities and projects eligible for CMAQ funding. Table 1 also 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.

The SAFETEA-LU directs States and MPOs to give priority to two categories of funding. First, to diesel retrofits, particularly where necessary to facilitate contract compliance, and other cost-effective emission reduction activities, taking into consideration air quality and health effects. Second, priority is to be given to cost-effective congestion mitigation activities that provide air quality benefits.

The development of a CMAQ-eligible project may occur through a public-private partnership. Private entity proposals that benefit the general public by clearly reducing emissions require a legal written agreement between the public agency and private or nonprofit entity specifying the use of funds, roles and responsibilities of participating entities, cost sharing arrangements for capital investments and/or operating expenses, and how the disposition of land, facilities, and equipment should original terms of the 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 that exceeds the obligation under Federal law.

**Table 1. Eligible CMAQ Activities and Projects**

- 1. 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

2. **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
3. **Alternative Fuels and Vehicles**
  - establishment of publicly-owned fueling facilities and other infrastructure needed to fuel alternative-fuel vehicles, unless privately-owned fueling stations are in place and reasonably accessible
  - support the conversion of private fueling facility to support alternative fuels through a public-private partnership
  - purchase of publicly-owned non-transit alternative fuel vehicles, including passenger vehicles, refuse trucks, street cleaners, and others
  - costs associated with converting fleets to run on alternative fuels
  - for private vehicles, the cost difference between alternative fuel vehicles and comparable conventional fuel vehicles
  - hybrid vehicles that have lower emission rates than their non-hybrid counterparts
  - hybrid passenger vehicles that meet EPA low emission and energy efficiency requirements for certification under the HOV exception provisions of SAFETEA-LU
  - projects involving heavier vehicles, including refuse haulers and delivery trucks may be eligible based on a comparison of the emissions projections of these larger candidate vehicles and other comparable models
4. **Congestion Reduction & Traffic Flow Improvements**
  - traditional traffic flow improvements, such as the construction of roundabouts, HOV lanes, left-turn or other managed lanes are eligible provided they demonstrate net emissions benefits
  - Intelligent Transportation Systems (ITS) projects such as traffic signal synchronization projects, traffic management projects, and regional multimodal traveler information systems, traffic signal control systems, freeway management systems, electronic toll-collection systems, transit management systems, and incident management programs
  - Value/Congestion Pricing projects that generate an emissions reduction, including, but not limited to: tolling infrastructure, such as transponders and other electronic toll or fare payment systems; small roadway modifications to enable tolling; marketing, public outreach efforts to expand and encourage the use of eligible pricing measures; and support services, such as transit in a newly tolled corridor
  - innovative pricing approaches supported through the Value Pricing Pilot Program
  - operating expenses for traffic flow improvements for a period not to exceed three years if shown to produce air quality benefits, if the expenses are incurred from new or additional services, and if previous funding mechanisms, such as fares or fees for services, are not displaced
  - projects or programs that involve the purchase of integrated, interoperable emergency communications equipment
5. **Transit Improvements**
  - new transit facilities (e.g., lines, stations, terminals, transfer facilities) are eligible if they are associated with new or enhanced mass transit service
  - rehabilitation of a facility may be eligible if the vast majority of the project involves physical improvements that will increase capacity and results in an increase in transit ridership
  - new transit vehicles (bus, rail, or van) to expand fleet or replace existing vehicles
  - diesel engine retrofits, such as replacement engines and exhaust after-treatment devices, are eligible if certified or verified by the EPA or CARB
  - other transit equipment may be eligible if it represents a major system-wide upgrade that will significantly improve speed or reliability of transit service, such as advanced signal and communications systems
  - fuel, whether conventional or alternative fuel, is an eligible expense only as part of a project providing operating assistance for new or expanded transit service, including fuel and fuel additives considered diesel retrofit technologies by EPA or CARB
  - operating assistance, including labor, fuel, maintenance, and related expenses, to introduce new transit service or expand existing transit service is eligible for a maximum of 3 years
  - regular transit fares may be subsidized as part of a comprehensive area-wide program to prevent exceedances of NAAQS during periods of high pollutant levels; must be combined with a marketing program to inform SOV drivers of other transportation options
6. **Bicycle and Pedestrian Facilities and Programs**
  - construction of bicycle and pedestrian facilities (paths, bike racks, support facilities, etc.) that are not exclusively recreational and reduce vehicle trips
  - non-construction outreach projects related to safe bicycle use
  - establishment and funding of State bicycle/pedestrian coordinator positions for promoting and facilitating nonmotorized transportation modes through public education, safety programs, etc.

## **7. Travel Demand Management**

- activities explicitly aimed at reducing SOV travel and associated emissions including fringe parking, traveler information services, shuttle services, guaranteed ride home programs, market research and planning in support Transportation Demand Management implementation, carpools, vanpools, traffic calming measures, parking pricing, variable road pricing, telecommuting, and employer-based commuter choice programs
- capital expenses and up to 3 years of operating assistance to administer and manage new or expanded TDM programs
- marketing and outreach efforts to expand use of TDM measures may be funded indefinitely, but only if broken out as distinct line items
- telecommuting activities including planning, preparing technical and feasibility studies, and training

## **8. Public Education and Outreach Activities**

- a wide range of public education and outreach activities, including activities that promote new or existing transportation services, developing messages and advertising materials (including market research, focus groups, and creative), placing messages and materials, evaluating message and material dissemination and public awareness, technical assistance, programs that promote the Tax Code provision related to commute benefits, transit “store” operations, and any other activities that help forward less-polluting transportation options

## **9. Transportation Management Associations**

- TMA start-up costs and up to 3 years of operating assistance

## **10. Carpooling and Vanpooling**

- carpools and vanpools marketing covers existing, expanded, and new activities to increase the use of carpools and vanpools and includes the purchase and use of computerized matching software and outreach to employers and guaranteed ride home programs
- vanpool vehicle capital costs include purchasing or leasing vans that do not directly compete with or impede private sector initiatives; vanpool operating expenses are limited to 3 years and include empty-seat subsidies, maintenance, insurance, administration, and other related expenses

## **11. Freight/Intermodal**

- projects and programs (e.g. new diesel engine technology or retrofits of vehicles or engines, nonroad mobile freight projects) that provide a transportation function and target freight capital costs including rolling stock or ground infrastructure are eligible provided that air quality benefits can be demonstrated

## **12. Diesel Engine Retrofits & Other Advanced Truck Technologies**

- applicable to onroad motor vehicles and nonroad construction equipment, project types in the diesel retrofit area include: diesel engine replacement, full engine rebuilding and reconditioning, the purchase and installation of after-treatment hardware including particulate matter traps and oxidation catalysts, and other technologies, and support for heavy-duty vehicle retirements programs
- purchase and installation of emission control equipment on school buses
- refueling projects (e.g., ultra-low sulfur diesel), but only if required to support the installation of emissions control equipment, repowering, rebuilding, or other retrofits of nonroad engines and only until the standards are effective and the fuel becomes commonly available through the regional supply and logistics chain. Eligible costs are limited to the difference between standard nonroad diesel fuel and ULSD
- outreach activities that provide information exchange and technical assistance to diesel owners and operators on retrofit options
- under a public-private partnership, projects for upgrading long-haul heavy-duty diesel trucks with advanced technologies, such as idle reduction devices, cab and trailer aerodynamic fixtures, and single-wide or other efficient tires are eligible

## **13. Idle Reduction**

- capital costs of off-board projects (e.g., truck stop electrification projects) that reduce emissions and are located within, or in proximity to and primarily benefitting a nonattainment or maintenance area
- capital costs of on-board projects (e.g., auxiliary power units, direct fired heaters, etc.) the heavy-duty vehicle must travel within, or in proximity to and primarily benefitting a nonattainment or maintenance area

## **14. Training**

- funds to support training and educational development for the transportation workforce must be directly related to implementing air quality improvements and be approved in advance by the FHWA Division Office

**15. Inspection/Maintenance (I/M) Programs**

- for publicly or privately owned I/M facilities that constitute new or additional efforts eligible activities include construction of facilities, purchase of equipment, I/M program development, and one-time start-up activities, such as updating quality assurance software or developing a mechanic training curriculum
- operating expenses are eligible for a maximum of three years
- State or local I/M program related administrative costs are eligible in States that rely on privately owned I/M facilities
- privately-owned I/M facilities such as service stations, that own the equipment and conduct emission test-and-repair services, requires a public-private partnership
- establishment of “portable” I/M programs, including remote sensing providing that they are public services, reduce emissions, and meet relevant regulations

**16. Experimental Pilot Projects**

- an “experimental” project or program must be defined as a transportation project and be expected to reduce emissions by decreasing vehicle miles traveled (VMT), fuel consumption, congestion, or by other factors

**17. In particulate matter nonattainment or maintenance areas, examples of eligible projects and programs include:**

- paving dirt roads
- street sweeping equipment

**Table 2. Ineligible CMAQ Activities and Projects**

- 1. 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**
- 2. Light-duty vehicle scrappage programs**
- 3. Projects that add new capacity for single-occupancy vehicle (SOV) are ineligible for CMAQ funding unless construction is limited to high occupancy vehicle (HOV) lanes**
- 4. Routine maintenance and rehabilitation projects (e.g., replacement-in-kind of track or other equipment, reconstruction of bridges, stations, and other facilities, and repaving or repairing roads) are ineligible for CMAQ funding as they only maintain existing levels of highway and transit service, and therefore do not reduce emissions**
- 5. Administrative costs of the CMAQ program may not be defrayed with program funds**
- 6. Projects that do not meet the specific eligibility requirements under United States Code titles 23 or 49**
- 7. Stand-alone projects to purchase fuel, except in certain states**
- 8. Routine preventive maintenance for vehicles is not eligible as it only returns the vehicles to baseline conditions**
- 9. Operating assistance for truck stop electrification projects is not an eligible activity since these projects generate their own revenue stream and can therefore recover all operating expenses**

**ROLE OF THE MAG AIR QUALITY TECHNICAL ADVISORY COMMITTEE  
IN THE CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ)  
PROJECT EVALUATION PROCESS**

CMAQ Projects for the Transportation Improvement Program

- Forward the evaluation of proposed CMAQ projects for the MAG Transportation Improvement Program to the MAG Transportation Review Committee and modal committees for use in prioritizing projects.
- Rank the Air Quality Projects to be forwarded to the MAG Transportation Review Committee.

Sequence of Committee Actions: Air Quality Technical Advisory Committee, Transportation Review Committee and Modal Technical Advisory Committees, Management Committee, Transportation Policy Committee, Regional Council.

PM-10 Certified Street Sweeper Projects

- Recommend a prioritized list of proposed PM-10 Certified Street Sweeper Projects for CMAQ funding and retain the prioritized list for any additional CMAQ funds that may become available due to year-end closeout, including redistributed obligation authority, or additional funding received by this region.

Sequence of Committee Actions: Air Quality Technical Advisory Committee, Management Committee, Regional Council.

Paving Unpaved Road Projects

- Rank the proposed Paving Unpaved Road Projects for CMAQ funding and forward to the MAG Transportation Review Committee.

Sequence of Committee Actions: Air Quality Technical Advisory Committee, Transportation Review Committee, Management Committee, Transportation Policy Committee, Regional Council.

# MAG COMMITTEE STRUCTURE

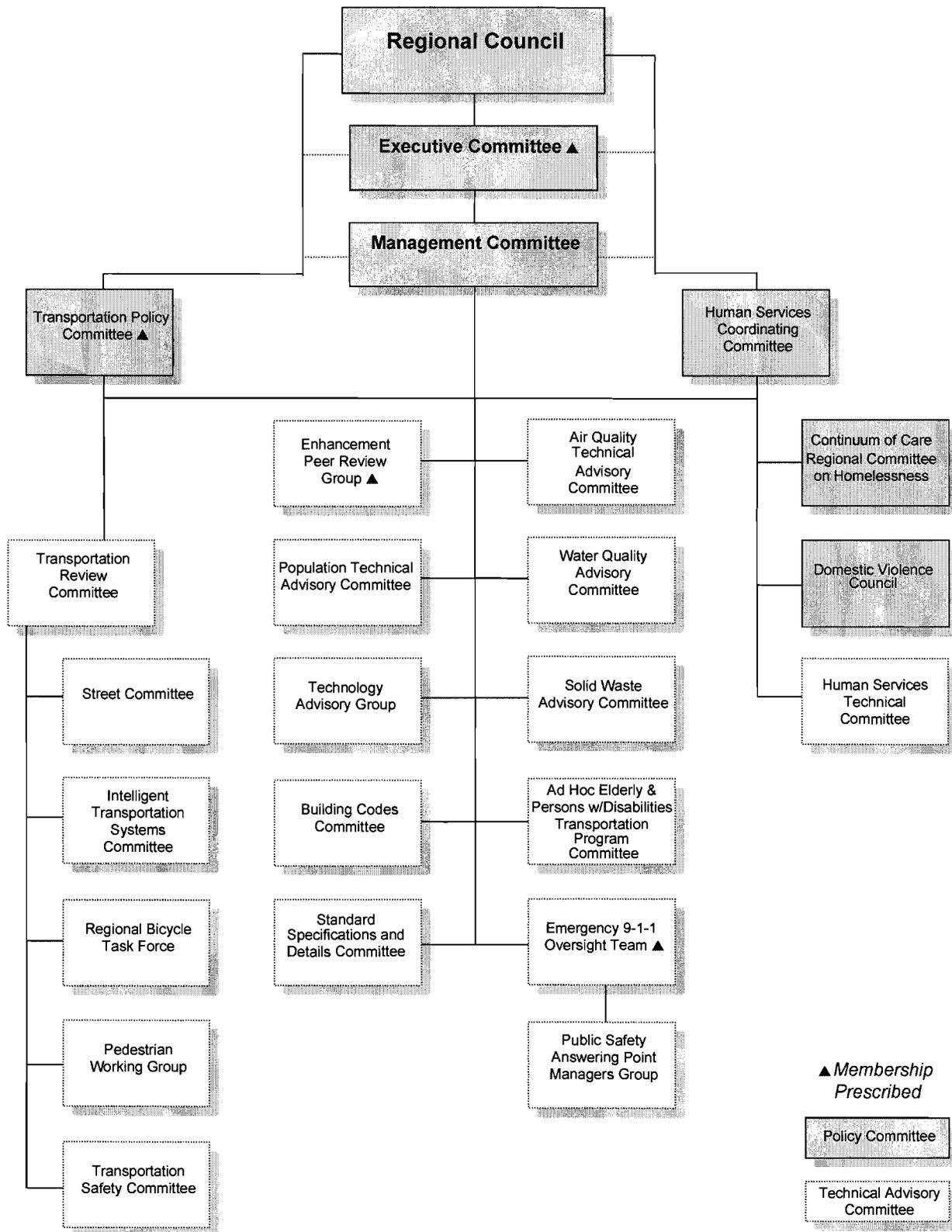


Figure 7: MAG Committee Structure