

April 22, 2010

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Doug Kukino, Glendale, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, April 29, 2010 - 1:30 p.m.
MAG Office, Suite 200 - Saguaro Room
302 North 1st 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 Kukino 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

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 March 25, 2010 Meeting Minutes

4. Chair and Vice Chair Appointments

On July 22, 2009, the MAG Regional Council approved the MAG Committee Operating Policies and Procedures. Officer positions for technical committees have one-year terms, with possible reappointment to serve up to one additional term, by consent of the respective committee. According to these policies and procedures, the chair and vice chair appointments of the MAG Air Quality Technical Advisory Committee are due to expire on June 30, 2010.

Technical committees may choose to do one of the following: 1) recommend reappointment of the current chair and vice chair to serve a second one-year term, or 2) have a new chair and vice chair appointed by

COMMITTEE ACTION REQUESTED

2. For information.

3. Review and approve the March 25, 2010 meeting minutes.

4. For information, discussion, and possible action to: 1) recommend reappointment of the current chair and vice chair to serve a second one-year term, or 2) have a new chair and vice chair appointed by the Regional Council Executive Committee.

the Regional Council Executive Committee. Officer reappointments will require action by the Air Quality Technical Advisory Committee at its April 29, 2010 meeting. Committees that choose to have the Executive Committee appoint a new chair and vice chair will require letters of interest from MAG member agencies. The letters of interest are requested to be submitted by Tuesday, June 1, 2010 to Councilwoman Peggy Neely, MAG Chair. The appointments will be made at the June 21, 2010 Executive Committee meeting. Please refer to the enclosed material.

5. Draft 2008 PM-10 Periodic Emissions Inventory

In accordance with the Clean Air Act, a Draft 2008 PM-10 Periodic Emissions Inventory has been prepared by the Maricopa County Air Quality Department. The inventory provides emissions estimates from point, area, nonroad mobile, onroad mobile and biogenic sources. The Maricopa Association of Governments prepared the emission estimates for the onroad mobile, biogenic, and some area and nonroad mobile sources. The inventory was recently released for a 30-day public review period. An overview of the inventory report will be presented by the Maricopa County Air Quality Department.

6. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for Tuesday, May 25, 2010 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, March 25, 2010
MAG Office
Phoenix, Arizona

MEMBERS ATTENDING

Michelle Wilson for Doug Kukino, Glendale, Chairman
Gaye Knight, Phoenix, Vice Chair
Paul Lopez for Sue McDermott, Avondale
*Elizabeth Biggins-Ramer, Buckeye
#Jim Weiss, Chandler
*Jamie McCullough, El Mirage
Kurt Sharp for Tami Ryall, Gilbert
*Cato Esquivel, Goodyear
*Scott Bouchie, Mesa
Maher Hazine for William Mattingly, City of Peoria
*Larry Person, Scottsdale
#Antonio DeLaCruz, Surprise
Oddvar Tveit, Tempe
#Mark Hannah, Youngtown
#Janet Martin for Ramona Simpson, Queen Creek
*Walter Bouchard, Citizen Representative
*Corey Woods, American Lung Association of Arizona
Wendy Crites for Grant Smedley, Salt River Project
Brian O'Donnell, Southwest Gas Corporation
*Mark Hajduk, Arizona Public Service Company
#Gina Grey, Western States Petroleum Association
*Randi Alcott, 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
Bob Downing for 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

*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
Julie Hoffman, Maricopa Association of Governments
Randy Sedlacek, Maricopa Association of Governments
Cathy Arthur, Maricopa Association of Governments
Dean Giles, Maricopa Association of Governments
Patrisia Magallon, Maricopa Association of Governments
Adam Xia, Maricopa Association of Governments
Feng Liu, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Chad Felkenberg, Soilworks, LLC
Denise Sumrall, Soilworks, LLC
Matt Poppen, Maricopa County Air Quality Department
Dan Catlin, Fort McDowell Yavapai Nation
Scott DiBiase, Pinal County Air Quality
Joonwon Joo, Arizona Department of Transportation
Mitch Wagner, Maricopa County Department of Transportation
Ben Davis, Maricopa County Air Quality Department
Heather Hodgman, City of Apache Junction
Leonard Montenegro, Arizona Department of Environmental Quality

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on March 25, 2010. Gaye Knight, City of Phoenix, Acting Chair, called the meeting to order at approximately 1:36 p.m. Gina Grey, Western States Petroleum Association; Mark Hannah, Town of Youngtown; Amanda McGennis, Associated General Contractors; Janet Martin, Town of Queen Creek; Duane Yantorno, Arizona Department of Weights and Measures; Antonio DeLaCruz, City of Surprise; and Jim Weiss, City of Chandler, 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 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. She noted that no public comment cards had been received.

3. Approval of the January 28, 2010 Meeting Minutes

The Committee reviewed the minutes from the January 28, 2010 meeting. Diane Arnst, Arizona Department of Environmental Quality (ADEQ), requested that the minutes be changed to reflect that Leonard Montenegro, ADEQ, attended the January 28, 2010 meeting as her proxy. Maher Hazine, City of Peoria, moved and Oddvar Tveit, City of Tempe, seconded and the motion to approve the January 28, 2010 meeting minutes with the correction carried unanimously.

4. Exceptional Events and Data Collection in the Vicinity of the West 43rd Avenue Monitor

Lindy Bauer, MAG, provided a presentation on the exceptional events and data collection in the vicinity of the West 43rd Avenue monitor. Ms. Bauer stated that the Environmental Protection Agency (EPA) has been reviewing the ADEQ exceptional events documentation and has questioned four high wind exceedances that occurred at the West 43rd Avenue monitor in 2008. She added that if EPA does not concur with the exceptional events, the four exceedances would count as a violation at the West 43rd Avenue monitor. Therefore, the region would not have its first year of clean data needed to be in attainment of the PM-10 standard. Ms. Bauer noted that the region needs three years of clean data for 2008, 2009 and 2010. She stated that MAG staff, along with its consultants, Sierra Research and T&B Systems, have been providing additional information to ADEQ to further support their exceptional events documentation. Ms. Bauer commented that the purpose of the presentation is to discuss the work being conducted.

Ms. Bauer stated that the MAG Five Percent Plan for PM-10 contained 53 committed control measures and was submitted to EPA in December 2007. She noted that the violations that occurred at the monitors in 2005 and 2006, which caused MAG to develop the Plan, were violations that occurred under stagnant conditions. Ms. Bauer indicated that there have been no violations at the monitors under stagnant conditions since that Plan was submitted. She mentioned that the exceedances being discussed in the presentation are due to high wind events.

Ms. Bauer stated that EPA has not acted to approve or disapprove the MAG 2007 Five Percent Plan for PM-10. She mentioned that the Clean Air Act requires EPA to take action within 18 months which would have been by June 30, 2009. Ms. Bauer added that on December 2, 2009, the Arizona Center

for Law in the Public Interest filed a lawsuit to order EPA to propose approval or disapproval of the Plan within one month and finalize the action within three months. She noted that EPA is currently in the process of reviewing the Five Percent Plan.

Ms. Bauer discussed the current issues, which included that the Five Percent Plan is based on a 2005 PM-10 emissions inventory. She commented on the downturn in the economy since 2005 and the impact on the mix of sources. Ms. Bauer mentioned that another issue is the monitored exceedances of the PM-10 standard in 2008 and 2009. She stated that ADEQ has documented 11 of the 12 exceedance days in 2008 as exceptional events. She added that exceptional events would not count against the region. Ms. Bauer commented that EPA is currently reviewing the ADEQ documentation and is questioning four of those exceedances. She indicated that there were also seven exceedance days in 2009 that occurred on high wind days. The ADEQ is currently reviewing these exceedances to determine if they are exceptional events. She noted that the deadline for the documentation is June 2010.

Ms. Bauer presented a chart of the PM-10 Monitoring Data. She indicated that ADEQ believes 11 of the 12 exceedance days in 2008 are exceptional events and that MAG agrees with the ADEQ documentation. Ms. Bauer also discussed the seven exceedance days in 2009. She stated that the exceptional events and documentation are very important. If EPA disagrees with the ADEQ exceptional events documentation, this could result in Plan disapproval, in whole or in part, which could trigger the Clean Air Act sanctions process. She added that the Plan may also need additional measures to reduce emissions by five percent per year until attainment, as measured at the monitors. Ms. Bauer indicated that this Committee spent a lot of time working on the Five Percent Plan and it would be extremely difficult to find additional measures. Ms. Bauer noted that the Plan has 53 measures in addition to the Serious Area PM-10 Plan that contains 77 control measures. Ms. Bauer indicated that MAG could also be required to revise the modeling in the Plan. There needs to be three years of clean data at all the PM-10 monitors in order to be in attainment.

Ms. Bauer stated that MAG, Maricopa County Air Quality Department (MCAQD), and ADEQ are in the process of updating the PM-10 emissions inventory to 2008. She added that the County anticipates having a draft inventory in April 2010 for review purposes. The inventory is due to EPA by June 2010. She commented that MAG staff and its consultants are providing assistance to EPA in reviewing the Five Percent Plan for PM-10 and the ADEQ documentation of the exceptional events. Ms. Bauer indicated that MAG, along with ADEQ and Maricopa County, are working on a data collection plan to determine the cause of the exceedances at the West 43rd Avenue monitor, which appear to be due to high wind exceptional events. She added that MAG and its consultants have been collecting additional field data on windy days.

Cathy Arthur, MAG, stated that MAG staff, Sierra Research, ADEQ, and the County have been working to provide additional information on the exceptional events documentation. She added that the current focus is on the four dates in 2008 that EPA is questioning. Ms. Arthur noted that ADEQ sent extensive documentation to EPA on these four dates along with the other seven exceedance days. She indicated that MAG staff is working to augment that documentation with additional information to convince EPA that those dates are exceptional events. Ms. Arthur commented that MAG has prepared additional information that provides evidence that these dates are high wind exceptional events.

Ms. Arthur presented a map of surface roughness. She indicated that the red lines on the map represent back trajectories of wind paths that occurred on seven different days including the four days in question. She noted that there were exceedances at the West 43rd Avenue monitor on these seven days. Ms. Arthur referred to the location of the West 43rd Avenue monitor. She stated that the red lines on the map represent the wind direction on the dates the West 43rd Avenue monitor exceeded the PM-10 standard. Ms. Arthur added that the back trajectories indicate from where the wind emanated. Ms. Arthur mentioned that the significance in the chart is the underlying land use. She stated that there is a measured surface roughness length for each type of land use, which ranges from 0.002 meters for vacant areas and river terrain to urban areas that are approximately 1.00 meters. Ms. Arthur added that the map shows the wind coming from the west-southwest covering an area with a low surface roughness up to where the monitor is located. She noted that the blue in the map represents the urban area. Ms. Arthur indicated that once the winds reach the urban area, there is higher surface roughness that creates turbulence. She commented that the turbulence result in the PM-10 depositing out of the wind and decreasing wind speeds. Ms. Arthur mentioned that MAG has also created mathematical and analytical approaches to confirm the impact of surface roughness on the PM-10 concentrations.

Ms. Arthur presented a map of the threshold friction velocities. She noted that the surface roughness and friction velocities are related. Ms. Arthur stated that the friction velocities represent speeds at which PM-10 will be ejected into the air from the ground and remain aloft. She added that the threshold speeds are provided for the following land uses; sand/gravel areas, river terrain, vacant disturbed areas, vacant desert areas, construction, and agriculture areas. Ms. Arthur indicated that the colors on the map represent the various land uses.

Ms. Arthur presented Land Use Adjusted PM-10 Emission Fluxes. She noted that the soil samples were based on Nickling and Gillies (1989) data collected in various areas of the State including Maricopa County in 1986. She indicated that the region is in an ideal position since we have these soil samples from our own State, which is rare. Ms. Arthur stated that MAG has taken the surface roughness values for each land use and calculated the threshold friction velocity. She added that the emission rates have also been weighted. Ms. Arthur discussed the adjusted flux and pointed out the first and second hours for the back trajectories. She also mentioned that anthropogenic percentages on the table indicate how much of the high PM-10 concentrations are created by humans as opposed to natural sources.

Ms. Arthur stated that MAG staff has prepared scientific work to support the surface roughness concept. She added that Feng Liu, MAG, is an atmospheric scientist who has written a paper that outlines the concept. Ms. Arthur noted that the paper written by Mr. Liu includes partial differential equations that support the surface roughness theory.

Ms. Arthur presented a conceptual diagram of the surface roughness concept. She indicated that there have been questions raised about the exceedances at the West 43rd Avenue monitor since there were no exceedances on those days at the monitors located two and four miles downwind. Ms. Arthur stated that the diagram shows that the winds are coming from the west and going over a rural area with a very low surface roughness. She added that wind speeds are relatively high since they are not being interrupted by surface roughness. Ms. Arthur noted that USGS data indicates that surface roughness around West 43rd Avenue monitor is about 0.11 meters; however, surface roughness increases to 0.56 meters at the South Phoenix monitor. She commented that this represents a 400 percent increase in surface roughness between the West 43rd Avenue and South Phoenix monitors which is attributed to

the urban build-up. Ms. Arthur indicated that this area is called the transition zone. She stated that PM-10 is declining in that area since there is a lot of turbulence caused by the surface roughness, which also decreases wind speeds.

Ms. Arthur presented charts showing the high correlation between PM-10 concentrations and wind speeds at the West 43rd Avenue and South Phoenix monitors. She stated that reductions in PM-10 highly correlate with the reductions in wind speeds when comparing the monitors. For example, the numbers are negative from 11:00 a.m. to 2:00 p.m. indicating that everything is declining between the two monitors. This means that surface roughness is an excellent explanation for the activity between those two monitors and why PM-10 is not high at the monitors that are two and four miles downwind. Ms. Arthur added that this analysis was performed for all seven days and all resulted in a similar pattern. She discussed wind direction changes which cause the numbers to become positive. Ms. Arthur noted that the winds were predominately coming from the southwest and west on these days.

Ms. Arthur stated that EPA has also questioned whether the winds are unusual relative to wind speeds at other times at the same monitor. She presented a chart of the diurnal profile of average PM-10 concentrations and wind speeds at the West 43rd Avenue monitor. Ms. Arthur indicated that the MAG consultant reviewed the average wind speeds and PM-10 concentrations over a seven year period. She noted that the chart shows the period where high winds occurred on June 4, 2008. Ms. Arthur commented that the threshold of 13 miles per hour was used since it is the lowest point where dust becomes airborne as indicated on the MAG threshold map. She mentioned that the high wind period was 11 hours long and included winds considerably higher than 13 miles per hour as well as high PM-10 concentrations. She noted that this chart shows that the high winds and the high PM-10 concentrations are correlated.

Ms. Arthur presented another chart that included the maximum wind speeds. She stated that the average wind speed is approximately 16 to 17 miles per hour; however, the maximum peak wind speed is above 30 miles per hour. Therefore, all of the sources shown on the friction velocity map are emanating dust since there are gusts over 30 miles per hour. She noted that this chart indicates that all of the land use categories would be contributing. Ms. Arthur commented that the MAG consultant, Sierra Research, then collected three years of five minute data and the hourly data for seven years to analyze the wind speeds for June 4, 2008 versus every other observation for the last three or seven years. She added that the consultant determined that this observation is number four out of approximately 1,100 observations, ranking it in the 99.7 percentile. Ms. Arthur indicated that the data is very compelling that these were unusual winds.

Ms. Arthur mentioned the challenges with determining the sources that are contributing to the high PM-10 concentrations. She discussed the data collection plan to evaluate and identify sources and unique geographic and meteorological conditions contributing to exceedances of the PM-10 standard at the West 43rd Avenue monitor. Ms. Arthur stated that the data collection plan is a cooperative effort between MAG, ADEQ, Arizona State University (ASU), EPA and MCAQD. She stated that the agencies have been meeting every two weeks to share information and progress on the data collection plan. Ms. Arthur added that the primary objective is to collect and analyze data on windy days, determine what sources and soils are contributing, and evaluate whether the dust plume originates beyond the area being tracked. She noted that the trajectories go back six hours.

Ms. Arthur indicated that the data collection plan includes establishing five temporary monitors upwind of the West 43rd Avenue monitor. She noted that ASU is adding streaker aerosol samplers at

each site. She mentioned that these are filter monitors that capture data in a short period. Ms. Arthur stated that ASU will do an analysis on the particle types to determine what may be contributing to the PM-10 concentrations. She added that a particle size analyzer was installed at the West 43rd Avenue monitor to measure the size of the particles that are coming into the site. Ms. Arthur noted that the particle size analyzer can measure 1 micron, 2.5 microns, 7 microns, 10 microns and 15 microns. She indicated that dustraks will be located downwind of the West 43rd Avenue monitor. Ms. Arthur commented that it is important to measure what is happening between the West 43rd Avenue, South Phoenix and Durango monitors. She mentioned that there will also be dustraks located in areas upwind of the West 43rd Avenue monitor. In addition, ADEQ will be installing digital cameras which will be looking down at the West 43rd Avenue monitor from various vantage points. She added that soil sampling will also be part of the data collection plan.

Ms. Arthur presented a Google Earth map showing the locations of the temporary monitors. She noted that the red pins represent the temporary monitors and the yellow pins represent the permanent monitors. Ms. Arthur stated that the first temporary monitor is located less than one mile from the West 43rd Avenue site; the second temporary monitor is one mile to the west of that monitor; the third temporary monitor is two miles west; between monitors three and four there are six miles; and 30 miles are between monitors four and five. She commented that temporary monitors one and five are operational; monitors two, three and four will be up and running over the next few weeks.

Ms. Arthur stated that the analysis of data collected on windy days will include back trajectories using a MAG model and a particle analysis, which will be performed by ASU and the MAG consultant. She added that photos will be examined to determine the location where dust plumes are emanating and graphs will also be created to show the relationship between PM-10 and wind speeds. Ms. Arthur indicated that the PM-10 gradients will be evaluated between the various temporary monitors and the PM-10 monitors to determine the contribution of local sources versus long range transport.

Brian O'Donnell, Southwest Gas Corporation, discussed various elevations at the monitors and stated that perhaps various gradients could determine whether the contributions are long range or short range. Ms. Arthur responded that the monitors are being set up at ten meters since that is the height of the West 43rd Avenue monitor. She added that everything is being kept at the same height so that the data is comparable. Mr. O'Donnell stated that setting the monitors at different elevations could possibly provide a better idea of where the dust is originating. He commented that the dust may not all blow horizontally and may also not be from the ground nearby. Ms. Arthur stated that the idea is to evaluate the gradients and move the portable dustraks closer if needed. She added that once there is a windy day, the data will be analyzed and it will be decided whether the dustraks should be moved in order to get a better idea of the activity influencing those monitors. Ms. Arthur indicated that she will mention his comments to the technical committee since the vertical profile has not been previously discussed.

Ms. Arthur discussed the data collection plan schedule which may have to be adjusted due to high rainfall during the past several months. There have also been permit issues. She noted that an electrical infrastructure has to be established for each of the temporary monitors. Ms. Arthur stated that the permits for monitors two, three, and four have been approved; however, the electricity needed to run the monitors has not yet been turned on by SRP. This has not been an issue since there has not been an opportunity for monitoring due to the recent rainfall. She added that a deadline of June 1, 2010 has been set for the draft report. Ms. Arthur commented that the goal is to report back in the

summer with the results and determine whether the sources are anthropogenic or natural. She noted that there may be a possibility that the results show a large natural contribution. Ms. Arthur added that MAG established early deadlines in order to provide answers to EPA as soon as possible, although the schedule may have to be altered due to the unusually wet weather.

Randy Sedlacek, MAG, discussed the Soil Survey for the West 43rd Avenue PM-10 Exceedances Study. Mr. Sedlacek stated that MAG is working with Maricopa County and ADEQ to evaluate and identify sources and unique geographic and meteorological conditions that may contribute to exceedances at the West 43rd Avenue PM-10 monitor. He added that soil samples will be analyzed to determine soils that have high PM-10 emissions as part of the West 43rd Avenue PM-10 Exceedances Study. Mr. Sedlacek indicated that ADEQ has a contract with ASU for soil analyses; however, ADEQ currently does not have the funds for these analyses. He mentioned that on March 22, 2010, the MAG Regional Council Executive Committee approved providing funding to ADEQ for the soil analyses.

Mr. Sedlacek stated that three categories of soil sampling sites will be surveyed: severe soil textures sites, alluvial sites, and soil grain size sites. He added that severe soil texture sites include sites with clay, silty clay, and sandy clay. The hypothesis is that soil with finer particles produces more windblown PM-10 emissions than soil with coarser particles. Mr. Sedlacek noted that MAG selected 14 sites based on NRCS soil maps, aerial images and back trajectories. He discussed that alluvial sites will also be surveyed, based on a recommendation from ADEQ. The hypothesis is that night time drainage deposits fine airborne particulates in alluvial channels which can be suspended during high winds. Mr. Sedlacek indicated that MAG selected four sites based on aerial images and back trajectories. He commented that Maricopa County recommended that soil grain size sites also be surveyed, which have very fine sands and coarse sands. The hypothesis is that windblown PM-10 emissions are generated by two mechanisms: sandblasting (windblown sand hitting soil particles) and saltation of particles (particles lifted into air for short distances by wind, falling back to ground in a curved arc, and hitting soil particles); and dry soil grain size is a good predictor of windblown PM-10 emissions (i.e., very fine sands produce more emissions than coarse sands). Mr. Sedlacek added that MCAQD selected four soil grain size sites based on NRCS data and back trajectory data from Sierra Research.

Mr. Sedlacek presented a map showing the soil sampling locations, the back trajectories from Sierra Research, and the NRCS soil texture data. He stated that the small red areas on the map represent the severe soil texture. He added that the severe soil texture sampling sites are shown as green dots, the alluvial sites are shown as red dots and the soil grain size sites are shown as yellow dots. He presented a table listing the sampling site ID, soil type/source, distance from the West 43rd Avenue monitor, and the data source. Mr. Sedlacek stated that the field survey will consist of collecting representative soil samples for laboratory analyses by ASU. The samples will be collected by MAG, ADEQ, and MCAQD staff. He added that MCAQD will also perform a drop ball test on the sampling sites to determine the presence of a soil crust and may conduct a threshold friction velocity test which estimates the wind speed needed to re-suspend soils at these sites.

Mr. Sedlacek discussed the laboratory analyses. He indicated that it will consist of a soil resuspension analysis which involves the resuspension of soil samples in a dust chamber and the collection of particulates on PM-10 filters. This analysis also includes the measurement of soil moisture of samples. He commented that the soil grain size analysis includes sieving samples through different sieves to

collect different size soil fractions. In addition, a hydrometer analysis will be used to determine silt and clay fractions.

Mr. O'Donnell inquired about the distance a PM-10 particle could travel at 13 miles per hour versus 20 miles per hour. Mr. Sedlacek responded that it would depend on the soil moisture and if the soil is loose. He added that Sierra Research indicated that particles could travel for hours in certain cases. Mr. Sedlacek commented that the different size gradients of soil may also impact how far the particles could travel. He noted that the small particles could travel further.

Ms. Bauer discussed the Phoenix Rio Salado Oeste Environmental Restoration Project. She commented that in January 2010, the City of Phoenix notified MAG that they received the Clean Water Act 404 permit that was necessary for the initial phase of the Rio Salado Oeste Environmental Restoration Project. Ms. Bauer indicated that the 404 permit allows the removal of material and grading on the City-owned parcel between 37th and 51st Avenues to create a terraced low flow channel profile necessary for this project.

Ms. Bauer indicated that the Rio Salado Oeste Project is a permanent long-term stabilization project for the Salt River area and located near the West 43rd Avenue monitor. She added that it is an environmental restoration project with the Army Corps of Engineers that includes flood control improvements and recreation features. Ms. Bauer mentioned that this project will connect and continue the restoration of the Salt River area from 19th to 83rd Avenues. She noted that the City of Phoenix received the 404 permit on December 28, 2009. Ms. Bauer presented a map of the Phoenix-owned parcel with the 404 permit. The cross-hatched section shows the location of the parcel. Ms. Bauer stated that the red dot on the map represents the West 43rd Avenue monitor. She also noted the land ownership along the Salt River area.

Ms. Bauer stated that the City of Phoenix also provided two maps of the initial design concept. The first map shows the Salt River area from 51st to 19th Avenues. She added that the map provides the locations of the wetlands, trees and vegetation. Ms. Bauer noted that the project will include approximately 1,400 acres of native habitat and recreational features. She indicated that the City of Phoenix anticipates that construction could begin in two to three years. Ms. Bauer presented the second map which shows the portion of the project from 83rd Avenue to 51st Avenue. She commented that both maps show the walk-in access points and the multi-purpose trails. Ms. Bauer presented a map of the Rio Salado Oeste Project with the back trajectories that were discussed earlier. She mentioned that the red area on the map illustrates the area for which the 404 permit was received for the City of Phoenix and the red dot represents the West 43rd Avenue monitor. Ms. Bauer added that the City of Phoenix has also provided the Committee with a handout on this project.

5. Notice of Intent to File a Lawsuit From the WildEarth Guardians for PM-10

Ms. Bauer stated that EPA has notified MAG that on February 1, 2010, the WildEarth Guardians provided a notice of intent to file a lawsuit against EPA for failure to take action on the MAG Five Percent Plan for PM-10. The Environmental Protection Agency has indicated that there are several notices of intent and lawsuits being filed around the country against EPA for failing to take action on various plans. Ms. Bauer noted that this is similar to the Center for Law in the Public Interest notice of intent. This notice also indicated that EPA had failed to take action on various Maricopa County rules.

6. CMAQ Annual Report

Dean Giles, MAG, provided the Congestion Mitigation and Air Quality Improvement Funds (CMAQ) Annual Report. He stated that the Federal CMAQ Guidance requires that states prepare an annual report on how CMAQ has been used and which projects have been obligated in the prior federal fiscal year including the expected air quality benefits. Mr. Giles added that MAG, in cooperation with the Arizona Department of Transportation (ADOT), has completed the report and a copy has been included in the packet that was provided to the Committee. He noted that the report is in the format that has been prescribed by the Federal Highway Administration. Mr. Giles indicated that the 44 projects included in the list have previously been provided to the Committee as part of the CMAQ evaluations for the Transportation Improvement Program update. He mentioned that the data for calculating the estimated air quality benefits was provided by the member agencies. Mr. Giles stated that MAG has applied the CMAQ methodologies for calculating the estimated air quality benefits. The benefits are shown in the table in terms of kilograms per day for volatile organic compounds, carbon monoxide, nitrogen oxides, and PM-10. He added that the air quality benefits for PM-2.5 are not reported since MAG is in attainment for this pollutant.

Mr. Hazine inquired if there have been any changes in the funding for street sweepers since the last update. Mr. Giles responded that Congress passed a bill containing the fiscal year 2010 appropriations for CMAQ and other federal programs. He added that MAG is awaiting confirmation from ADOT and the Federal Highway Administration. Mr. Giles indicated that after the confirmation has been received, MAG will send letters to the agencies that have been approved for funding for PM-10 street sweepers.

7. Additional Funding for PM-10 Pave Unpaved Road Projects

Mr. Giles stated that, the MAG Regional Council Executive Committee, in endeavoring to integrate programs and avoid areas of duplication, took action to eliminate the \$300,000 Telework and Ozone Outreach Program contract in November 2009. He added that the Executive Committee also took action to transfer the Regional Public Transportation Authority (RPTA) telework staff cost contained in that contract to the RPTA Regional Rideshare Program contract. In addition, the action included keeping the overall contract amount of the Regional Rideshare Program at \$594,000 in fiscal year 2010 and in future years. Mr. Giles stated that this action has made the following funding available: \$300,000 for fiscal year 2010, \$391,000 for fiscal year 2011, and \$391,000 for fiscal year 2012. He indicated that MAG staff is recommending that this funding be programmed for PM-10 Pave Unpaved Road Projects. Mr. Giles noted that the projects would be programmed in a subsequent meeting by the MAG Transportation Review Committee.

Ms. Bauer commented that MAG staff believes this is a viable recommendation to make to the Transportation Review Committee for additional unpaved road funding. She added that prior to this time additional funding was not available.

8. Final Revisions to the Nitrogen Dioxide Standard

Ms. Bauer stated that the region has not been violating the nitrogen dioxide standard; however, EPA has tightened the standard. Ms. Bauer mentioned that Maricopa County reported at the last meeting that they will be monitoring near the roadways in the future since it is part of the requirements for the

new nitrogen dioxide standard. The EPA materials and fact sheet have been provided to the Committee.

Mr. O'Donnell inquired about the monitoring of nitrogen dioxide and the number of sites. Ben Davis, Maricopa County Air Quality Department, responded that the County is currently operating five monitors in the metro area for nitrogen dioxide. He commented that one is near a road, 27th Avenue; however, it will have to be moved closer. Mr. O'Donnell inquired about the levels of the pollutant. Mr. Davis responded that for the one-hour standard, the region is recording nitrogen dioxide levels at approximately 80 percent of the standard. He added that the monitor is not close enough for the near roadway monitoring that is required. Mr. Davis noted that the monitor will have to be moved closer and into higher traffic levels.

9. Call for Future Agenda Items

Chris Horan, Salt River Pima-Maricopa Indian Community, recommended an update on the Air Quality Program for the Salt River-Pima Maricopa Indian Community be provided at an upcoming meeting. Ms. Knight recommended that an update be provided on the data being collected around the West 43rd Avenue monitor, if additional information is available.

Ms. Knight announced that the next meeting of the Committee has been tentatively scheduled for April 29, 2010 at 1:30 p.m. With no further comments, the meeting was adjourned at 2:56 p.m.

April 22, 2010

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Lindy Bauer, Environmental Director

SUBJECT: CHAIR AND VICE CHAIR APPOINTMENTS

On July 22, 2009, the MAG Regional Council approved the MAG Committee Operating Policies and Procedures. Officer positions for technical committees have one-year terms, with possible reappointment to serve up to one additional term, by consent of the respective committee. According to these policies and procedures, the chair and vice chair appointments of the MAG Air Quality Technical Advisory Committee are due to expire on June 30, 2010.

Technical committees may choose to do one of the following: 1) recommend reappointment of the current chair and vice chair to serve a second one-year term, or 2) have a new chair and vice chair appointed by the Regional Council Executive Committee. Officer reappointments will require action by the Air Quality Technical Advisory Committee at its April 29, 2010 meeting. Committees that choose to have the Executive Committee appoint a new chair and vice chair will require letters of interest from MAG member agencies. The letters of interest are requested to be submitted by **Tuesday, June 1, 2010** to Councilwoman Peggy Neely, MAG Chair, at the MAG Office located at 302 N. 1st Avenue, Suite 300, Phoenix, Arizona 85003. The appointments will be made at the June 21, 2010 Executive Committee meeting.

If you have any questions, please contact Lindy Bauer at the MAG Office at (602) 254-6300 or lbauer@mag.maricopa.gov.

cc: MAG Management Committee
MAG Intergovernmental Representatives