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February 21, 2013

TO: Members of the MAG Air Quality Technical Advisory Committee

FROM: Oddvar Tveit, Tempe, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Thursday, February 28, 2013 - 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 Tveit 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 January 24, 2013 Meeting Minutes

4. Draft MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area

The Draft MAG 2013 Carbon Monoxide Maintenance Plan has been prepared in accordance with Section 175A(b) of the Clean Air Act. There have been no violations of the one-hour carbon monoxide standard since 1984 and no violations of the eight-hour standard since 1996. The modeling analysis in the maintenance plan demonstrates that the standards will continue to be met through 2025.

On February 19, 2013, a public hearing was conducted on the Draft MAG 2013 Carbon Monoxide Maintenance Plan. No public comments were received. The MAG Air Quality Technical Advisory Committee may

2. For information.

3. Review and approve the January 24, 2013 meeting minutes.

4. For information, discussion and recommendation to adopt the Draft MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area.

make a recommendation to the MAG Management Committee. The MAG Regional Council may take action on March 27, 2013. Please refer to the enclosed information.

5. Update on the MAG 2012 Five Percent Plan for PM-10 and Exceptional Events Issues

By February 14, 2013, the Environmental Protection Agency (EPA) was required to approve the MAG 2012 Five Percent Plan for PM-10 in order to avoid the imposition of a federal implementation plan. The documentation for the remaining 26 exceptional event days that occurred in 2011 and 2012 had to be submitted and concurred with by EPA in time for EPA to approve the Five Percent Plan. The required documentation is extensive and represents a tremendous workload.

The Arizona Department of Environmental Quality (ADEQ) has completed all of the documentation with consultant assistance at an estimated cost of \$500,000 and technical assistance from Maricopa County and the Maricopa Association of Governments. Ten packages of exceptional events became available for public review on December 3, 2012 and were transmitted to EPA on January 28, 2013. The remaining seven packages became available for public review on January 14, 2013 and were transmitted to EPA on February 13, 2013. Comments were received from the Arizona Center for Law in the Public Interest and ADEQ has responded to the comments. EPA is currently in the process of reviewing the exceptional events documentation.

On February 15, 2013, the Arizona Center for Law in the Public Interest filed a Notice of Intent to file a lawsuit against EPA for failure to take final action on the MAG 2012 Five Percent Plan for PM-10 by February 14, 2013 or impose a federal implementation plan. If EPA does not take action within 60 days, the Arizona Center for Law in the Public Interest intends to file a lawsuit to compel compliance. Please refer to the enclosed material.

5. For information and discussion.

6. City of Phoenix Miami Street/Superior Street Paving Project Completed

The City of Phoenix has completed the paving of Miami Street/Superior Street to reduce PM-10 emissions. The challenge in paving these types of roads is that they are privately owned and the city cannot pave them without obtaining right-of-way by dedication or purchase. The City of Phoenix will give a presentation on how this project was successfully completed.

7. PM-2.5 Exceptional Events and Remand of Implementation Rules for the 1997 PM-2.5 Standard

On December 14, 2012, EPA took action to strengthen the annual PM-2.5 standard to 12 micrograms per cubic meter and retain the 24 hour PM-2.5 standard of 35 micrograms per cubic meter. EPA also retained the existing PM-10 standards.

At the last meeting, a presentation was given on these standards and the air quality monitoring data for the region. Several of the elevated PM-2.5 readings at the monitors occurred on the same days as the PM-10 exceptional events.

In addition, on January 4, 2013, the U.S. Court of Appeals for the D.C. Circuit vacated and remanded two implementation rules for the 1997 PM-2.5 standard. The court opinion requires EPA to repromulgate the rules under the more stringent provisions for PM-10 nonattainment areas contained in Subpart 4 of Part D of the Clean Air Act, as opposed to the general implementation provisions in Subpart 1 of Part D of the Clean Air Act. A presentation will be provided.

8. Call for Future Agenda Items

The next meeting of the Committee has been tentatively scheduled for **Thursday, March 28, 2013 at 1:30 p.m.** The Chairman will invite the Committee members to suggest future agenda items.

6. For information and discussion.

7. For information and discussion.

8. For information and discussion.

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

Thursday, January 24, 2013
MAG Office
Phoenix, Arizona

MEMBERS ATTENDING

Oddvar Tveit, Tempe, Chairman	* Steve Trussell, Arizona Rock Products Association
Elizabeth Biggins-Ramer, Buckeye, Vice Chair	Amy Bratt, Greater Phoenix Chamber of Commerce
* Kristen Sexton, Avondale	# Amanda McGennis, Associated General Contractors
# Jon Sherrill for Jim Weiss, Chandler	* Spencer Kamps, Homebuilders Association of Central Arizona
# Jamie McCullough, El Mirage	# Mannie Carpenter, Valley Forward
Jessica Koberna, Gilbert	Kai Umeda, University of Arizona Cooperative Extension
Doug Kukino, Glendale	Beverly Chenausky, Arizona Department of Transportation
* Cato Esquivel, Goodyear	Diane Arnst, Arizona Department of Environmental Quality
# Scott Bouchie, Mesa	* Environmental Protection Agency
William Mattingly, Peoria	Jo Crumbaker, Maricopa County Air Quality Department
Philip McNeely, Phoenix	Michelle Wilson, Arizona Department of Weights and Measures
Sam Brown for Tim Conner, Scottsdale	* Ed Stillings, Federal Highway Administration
# Antonio DeLaCruz, Surprise	* Judi Nelson, Arizona State University
# Lloyce Robinson, Youngtown	Stan Belone for Christopher Horan, Salt River Pima-Maricopa Indian Community
Ramona Simpson, Queen Creek	
* American Lung Association of Arizona	
Kristin Watt, Salt River Project	
* Rebecca Hudson, Southwest Gas Corporation	
Ann Carlton for Mark Hajduk, Arizona Public Service Company	
* Gina Grey, Western States Petroleum Association	
Robert Forrest, Valley Metro/RPTA	
* Dave Berry, Arizona Motor Transport Association	
Jeannette Fish, Maricopa County Farm Bureau	

*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	Shane Kiesow, City of Apache Junction
Dean Giles, Maricopa Association of Governments	Scott DiBiase, Pinal County Air Quality
Taejoo Shin, Maricopa Association of Governments	Dan Catlin, Fort McDowell Yavapai Nation
Matt Poppen, Maricopa Association of Governments	Matt Tsark, Strand Associates Inc.
Julie Hoffman, Maricopa Association of Governments	Mike Sabatini, Baker
Kara Johnson, Maricopa Association of Governments	Stacy Cleson, Citizen
Feng Liu, Maricopa Association of Governments	Justine Hecht, Citizen
Adam Xia, Maricopa Association of Governments	Jezz Putnam, Citizen
Nathan Pryor, Maricopa Association of Governments	Erika Machuca, Citizen
Kelly Taft, Maricopa Association of Governments	Andrew Pedro, Citizen
Randy Sedlacek, Maricopa Association of Governments	Ana Morago, Citizen
Joe Gibbs, City of Phoenix	Jeff Moses, Citizen
Rusty Van Leuven, Arizona Department of Agriculture	Ana Alicia Gonzalez, Citizen
	Margaret Plews, Citizen

1. Call to Order

A meeting of the Maricopa Association of Governments (MAG) Air Quality Technical Advisory Committee (AQTAC) was conducted on January 24, 2013. Oddvar Tveit, City of Tempe, Chair, called the meeting to order at approximately 1:30 p.m. Jon Sherrill, City of Chandler; Jamie McCullough, City of El Mirage; Scott Bouchie, City of Mesa; Lloyce Robinson, Town of Youngtown; Mannie Carpenter, Valley Forward; Amanda McGennis, Associated General Contractors; and Antonio DeLaCruz, City of Surprise, attended the meeting via telephone conference call.

Chair Tveit indicated that many audience members attending the meeting have interest in the Loop 202 South Mountain Freeway. He stated that the South Mountain Freeway is not on the Committee agenda. Chair Tveit noted that members of the audience are welcome to provide public comment during the Call to the Audience at the beginning of the meeting. He instructed audience members who wish to speak on the South Mountain Freeway to fill out a blue public comment card. Chair Tveit commented that based upon the regional plan developed by MAG, the Arizona Department of Transportation (ADOT) is working with the Federal Highway Administration and other federal and state agencies to conduct the engineering and environmental study of the proposed freeway. This Draft Environmental Impact Statement is being developed and is expected to be available for public review and a public hearing later this year. Additionally there will be another opportunity for public review and a public hearing for the Final Environmental Impact Statement at a later date. Chair Tveit stated that comments are also welcome through the project hotline. The number for the hotline is 602-712-7006.

2. Call to the Audience

Chair Tveit 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. Public comment is provided at the beginning of the meeting for nonagenda items and nonaction agenda items. Citizens are asked 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 Committee requests an exception to this limit.

Chair Tveit recognized public comment from Margaret Plews, a resident of Phoenix, who indicated that the Sierra Club has issued a report that labels the Loop 202 South Mountain Freeway one of the worst transportation projects in the Country with regard to air quality impact. Ms. Plews stated that she has Chronic Obstructive Pulmonary Disease and was surprised when she moved to Arizona from Michigan that some days she is advised not to breathe the air outside. She commented that she would hate to see the air pollution get worse. Ms. Plews discussed that communities impacted most by air pollution are disadvantaged communities and communities of color. She added that there is an overrepresentation of asthma in communities of color. Ms. Plews expressed dissent for the Loop 202 South Mountain Freeway Transportation Project.

Chair Tveit recognized public comment from Ana Alicia Gonzalez, who stated she is a resident of Phoenix. She noted that she is against the Loop 202 South Mountain Freeway. Ms. Gonzalez stated that the Loop 202 is not a good idea for air quality control purposes, as well as for cultural reasons. She indicated that she is against the Loop 202 South Mountain Freeway.

Chair Tveit recognized public comment from Jeff Moses, who said he is a resident of Mesa. He indicated that this is his second time at a MAG meeting speaking against the Loop 202 South Mountain Freeway.

Mr. Moses commented that exploding South Mountain for construction will not aid in reducing air pollution in the Phoenix area. He mentioned that he is a college student and if he turned in reports as late as the environmental impact statement (EIS), he would fail his classes. Mr. Moses discussed that some activists have been waiting for the EIS for 25 years. He mentioned that the South Mountain Freeway should be stopped now and it should not be built.

Chair Tveit recognized public comment from Ana Morago. She stated that she also came to speak at the MAG Transportation Policy Committee on behalf of her nephew Avan. Ms. Morago commented that her nephew's future is at risk with the Loop 202 South Mountain Freeway being built right next to his home and the homes of his family and friends. She indicated that not only is the Loop 202 Freeway risking her nephew's future, but also his future children's lives, and her future children as well.

Chair Tveit recognized public comment from Andrew Pedro, a citizen of the Gila River Indian Community speaking against the Loop 202 South Mountain Freeway. Mr. Pedro indicated that the mountain is a sacred site to the Gila River people and it is also the site of their Creation Story. The O'odham story of the "Man in the Maze" is said to take place on South Mountain. Mr. Pedro stated that not only are children's health at risk, but their identity. He added that cutting the mountain would take away the meaning the mountain has to people. Mr. Pedro discussed that Hohokam means those who are gone. He stated that the environmental impact statement has taken over twenty years to be released and is still not available. Mr. Pedro noted that ADOT had announced a 2011 release date for the EIS; however, the Gila River Indian Community then had to vote on the Loop 202 South Mountain Freeway without the EIS. He inquired how the Community was/is to make an informed decision on how to vote without an EIS.

Chair Tveit recognized public comment from Erika Machuca. She indicated that she is a resident of Phoenix and is speaking against the Loop 202 South Mountain Freeway. Ms. Machuca stated that she appreciates the beauty of Arizona's natural landscape and that many people who travel to Phoenix appreciate the natural and cultural beauty that is offered here. She commented that both the social and environmental aspects of the mountain are invaluable. Ms. Machuca discussed that she opposes the Loop 202 South Mountain Freeway because of the environmental degradation on the Gila River Indian Community and Phoenix residents. She commented that the Arizona air quality is already poor. Ms. Machuca expressed that the South Mountain Freeway would make air pollution worse in the surrounding areas.

Chair Tveit recognized public comment from Jezz Putnam who indicated that he has spoken at three other MAG Committee meetings before today. Mr. Putnam discussed that he thought the AQTAC would be a good Committee to speak with about the resistance to the Loop 202 South Mountain Freeway. He stated that in 2006 the Environmental Protection Agency (EPA) issued a study for the Phoenix area to improve particulate matter pollution within a year. Mr. Putnam inquired how moving forward with a project that will pollute the Valley with more pollution and increase particulate matter is allowed in the face of strict EPA particulate standards. He commented that trucks not only add particulate matter pollution, but any idling vehicle contributes particulates as well. Mr. Putnam discussed that there is no research to prove that building freeways reduces traffic and that this is a dated idea from the 1980's when the South Mountain Freeway was proposed. He stated that the no build option for the freeway needs to be taken seriously. Mr. Putnam mentioned that he also learned that teachers in the Valley cannot take children outside for recess if a red flag is raised. He commented that the red flag is raised frequently. He stated that this might appeal to Committee members with children. Mr. Putnam asked the Committee

to read the environmental articles in *The Arizona Republic* regarding air quality. He added that the Sierra Club has labeled the Loop 202 South Mountain Freeway one of the worst transportation projects in the Country. Mr. Putnam stated that this publicity is not the best way to advertise the area to people looking to move to Arizona. He explained that South Mountain is not only an attraction, but it is a sacred place to native people. Mr. Putnam stated that air pollution from the South Mountain Freeway is environmentally racist. He thanked the Committee.

Chair Tveit recognized public comment from Justine Hecht who stated that she was a resident of the City of Peoria, but now resides in the City of Phoenix. Ms. Hecht recalls that the Valley air used to be blue, but the air is no longer blue. She stated that the Arizona Department of Environmental Quality (ADEQ) has been tasked with maintaining clean air. Ms. Hecht mentioned that expanding the Loop 202 South Mountain Freeway and other freeways as well, for example the proposed freeway between Phoenix and Las Vegas, will not change the direction of transportation. She commented that the Valley requires public transportation and bikes. Ms. Hecht discussed that freeways are the perpetuation of old thoughts that cannot be kept if the areas cultural and environmental beauty is to be maintained.

Chair Tveit recognized public comment from Stacy Cleson, who indicated that she has lived in Tempe and Phoenix for 12 years. Ms. Cleson discussed the CANAMEX trade corridor from Alberta, Canada to Mexico. She indicated that the Loop 202 South Mountain Freeway is not an official trade route of the CANAMEX Corridor, but the South Mountain Freeway would contribute to this trade infrastructure. Ms. Cleson commented that the Loop 202 and other transportation infrastructure of the CANAMEX Corridor will facilitate more freight traffic, which is an environmental concern. She stated that she understands that this trade corridor may be a part of the North American Free Trade Agreement and that there is a lot of private industry promoting the development of this trade corridor. Ms. Cleson added that many Maricopa County residents may not be aware of the CANAMEX trade route. She asked that people take into consideration that residents may not want the infrastructure for trade routes.

Chair Tveit thanked everyone for their comments. He indicated that no additional blue comment cards had been received.

3. Approval of the October 25, 2012 Meeting Minutes

The Committee reviewed the minutes from the October 25, 2012 meeting. William Mattingly, City of Peoria, moved and Philip McNeely, City of Phoenix, seconded, and the motion to approve the October 25, 2012 meeting minutes carried unanimously.

4. Update on the MAG 2012 Five Percent Plan for PM-10 and Exceptional Events

Lindy Bauer, Maricopa Association of Governments, provided an update on the MAG 2012 Five Percent Plan for PM-10 and exceptional events. She indicated that EPA is scheduled to take action on the Plan by February 14, 2013. Ms. Bauer noted that the documentation for the 26 exceptional event days is available for public review. The Arizona Department of Environmental Quality has had an overwhelming workload documenting the exceptional event days, spending an estimated \$500,000 in consultant assistance. Ms. Bauer stated that MAG provided assistance, preparing five of the 17 exceptional event packages. Additionally, Maricopa County provided assistance with the exceptional event documentation. The remaining exceptional event packages were completed and available for public review by January 14, 2013 for a thirty day public comment period. Ms. Bauer commented that ADEQ did receive comments from the Arizona Center for Law in the Public Interest. The ADEQ responded to the

comments received in a letter dated January 16, 2013. Ms. Bauer discussed that if ADEQ receives comments on the exceptional event documentation that is currently available for public review, a response will be prepared and submitted to EPA with the exceptional event documentation. Ms. Bauer stated that EPA has been very helpful throughout this process. She indicated that EPA has provided assistance to the ADEQ consultants, ADEQ staff, MAG staff, and Maricopa County with the exceptional event documentation. Ms. Bauer stated that MAG appreciates the efforts of all the participating agencies in preparing the exceptional event documentation.

Ms. Bauer reviewed comments on the Draft EPA Exceptional Events Guidance. She noted that the MAG comments were submitted in August 2012 and provided to the Committee. She added that a presentation on what the comments would include had also been given to the Committee. Ms. Bauer stated that comments submitted by the Western States Air Resources Council, ADEQ, Maricopa County, Associated General Contractors, and Congressman Flake have been provided in the agenda packet. She noted that many of the comments made by the agencies were in sync. Ms. Bauer commented that while some improvements have been made to the Draft EPA Exceptional Event Guidance, the documentation remains resource intensive. She discussed that MAG staff will continue to work on this issue.

Ms. Bauer stated that the letter MAG received from EPA, regarding the comments submitted on the Draft EPA Exceptional Events Guidance, is included in the agenda packet. EPA stated that they will consider the MAG comments and other comments and may decide to issue revised guidance or revise the EPA Exceptional Event Rule. Ms. Bauer stated that MAG will keep the Committee informed on this topic.

Diane Arnst, Arizona Department of Environmental Quality, stated that during the Criteria Pollutants Committee call with the National Association of Clean Air Agencies, an EPA spokesman indicated that they plan to issue a High Wind Exceptional Event Guidance Document on February 15, 2013. She commented that EPA also mentioned issuing guidance on fire related exceptional events, as well as, ozone exceptional events. Ms. Arnst indicated that there may be additional comment opportunities in the future with regard to exceptional events.

Doug Kukino, City of Glendale, inquired if there was a possibility that EPA will not meet the February 14, 2013 scheduled deadline for action on the MAG 2012 Five Percent Plan for PM-10 and what happens if the deadline is not met. Ms. Bauer replied that the timeline is associated with the withdrawal of the MAG 2007 Five Percent Plan for PM-10. According to the Clean Air Act requirements, if EPA does not approve the Plan then a Federal Implementation Plan would be implemented. Ms. Bauer mentioned that EPA has informally indicated to MAG and ADEQ that the exceedances appear to be exceptional events. EPA is currently reviewing the exceptional event documentation that is available for public review. Ms. Bauer stated that MAG is hopeful that EPA will take approval action. Chair Tveit thanked Ms. Bauer for the update.

5. EPA Revisions to the Particulate Standards

Matt Poppen, Maricopa Association of Governments, presented the EPA final revisions to the particulate matter standards. He stated that the final revision of the National Ambient Air Quality Standards for Particulate Matter was published in the Federal Register on January 15, 2013. Mr. Poppen indicated that the biggest change was seen in the primary annual PM-2.5 standard which was revised from 15.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to $12.0 \mu\text{g}/\text{m}^3$. The following standards were retained: the 24-hour PM-2.5 standard of $35 \mu\text{g}/\text{m}^3$; the 24-hour PM-10 standard of $150 \mu\text{g}/\text{m}^3$; and both the PM-10 and PM-2.5 secondary standards. He discussed a new rule requirement for near-road PM-2.5 monitors in each

urban area (Core Based Statistical Area) with a population of one million or more, phased in between the years 2015-2017. Maricopa County will require one near-road PM-2.5 monitor. Mr. Poppen stated that the Air Quality Index was updated to accommodate the new levels. He mentioned that certain major source permits were grandfathered as well.

Mr. Poppen discussed a webinar that EPA provided on December 19, 2012 regarding the final revisions to the particulate matter standards. He indicated that according to the schedule that was provided in the webinar, EPA will make final area designations in December 2014. Mr. Poppen added that attainment dates have been proposed for 2020 with a possible five year extension to 2025 depending on the severity of the classification. EPA projects that 99 percent of counties in the United States will be able to meet the annual fine particle health standard of $12.0 \mu\text{g}/\text{m}^3$ in 2020. EPA projects that seven counties in California will not meet the annual PM-2.5 standard by 2020 with current and existing controls.

Mr. Poppen provided a comparison between current Maricopa County PM-2.5 data and the new PM-2.5 standard using data from the Maricopa County Air Quality Department. He explained that the form of the annual PM-2.5 standard is a three year average of the annual value from each year. Given this formula, the current annual PM-2.5 average for 2010-2012 in Maricopa County is $9.3 \mu\text{g}/\text{m}^3$ for the South Phoenix Monitor and $10.9 \mu\text{g}/\text{m}^3$ for the West Phoenix Monitor. Mr. Poppen noted that the annual averages provided are preliminary since all of the 2012 data is not yet quality assured. However, he stated that the annual averages should not change significantly. Mr. Poppen indicated that it appears Maricopa County will meet the new standard for the 2010-2012 period.

Mr. Poppen discussed that the form of the 24-hour PM-2.5 standard is a three year average of the 98th percentile value from each year. Mr. Poppen mentioned that the 98th percentile value equates to approximately the eighth highest value of each year due to the continuous monitoring system. The 24-hour average PM-2.5 standard is $35 \mu\text{g}/\text{m}^3$. The current 24-hour average PM-2.5 for 2010-2012 in Maricopa County is $24.2 \mu\text{g}/\text{m}^3$ for the South Phoenix Monitor and $28.5 \mu\text{g}/\text{m}^3$ for the West Phoenix Monitor. Mr. Poppen noted that the current air quality data meets the 24-hour standard.

Mr. Poppen stated that 2013 will be a critical year for achieving attainment of the revised annual PM-2.5 standard of $12.0 \mu\text{g}/\text{m}^3$. He brought attention to the Durango Monitor that has the following values: the 2011 PM-2.5 annual average value is $12.3 \mu\text{g}/\text{m}^3$ and the 2012 PM-2.5 annual average preliminary value is $11.6 \mu\text{g}/\text{m}^3$. Mr. Poppen indicated that the 2013 annual average PM-2.5 value will need to be $12.1 \mu\text{g}/\text{m}^3$ or less to meet the revised standard. Similarly, the West Phoenix Monitor has the following values: the 2011 PM-2.5 annual average value is $11.5 \mu\text{g}/\text{m}^3$ and the 2012 PM-2.5 annual average preliminary value is $12.9 \mu\text{g}/\text{m}^3$. Mr. Poppen commented that the 2013 annual average PM-2.5 value will need to be $11.6 \mu\text{g}/\text{m}^3$ or less at the West Phoenix Monitor to meet the revised standard. He commented that the County annual PM-2.5 levels were safely under the old standard of $15.0 \mu\text{g}/\text{m}^3$, however the levels are very close to the revised standard of $12.0 \mu\text{g}/\text{m}^3$. Chair Tveit thanked Mr. Poppen for the update.

6. ADEQ Form for Reporting on the Implementation of PM-10 Measures

Ms. Bauer reviewed the ADEQ form for reporting on the implementation of PM-10 measures. She stated that in 2012, the Arizona Legislature passed House Bill 2798 which requires local governments in Area A and state agencies to submit an annual report to ADEQ regarding the implementation of various PM-10 control measures. The bill directed ADEQ to release a form to report the status and implementation of

PM-10 control measures. The form has been developed and will be due to ADEQ by March 30th of every year. Copies of the forms was made available for the Committee.

Ms. Arnst indicated that the form will soon be available on the ADEQ website: www.azdeq.gov. She noted that the forms will also be sent out electronically in which agencies can fill out and save the forms electronically. Ms. Arnst clarified that the forms can be emailed as an attachment, mailed in as hard copy, or faxed to the ADEQ Air Quality Director Eric Massey. She discussed that the information received from the forms will be consolidated and serve two functions. First, the information will demonstrate to EPA that the improvements in air quality are from permanent and enforceable emission reductions. Secondly, with regard to exceptional event documentation, reasonable controls have been implemented in the area. Ms. Arnst commented that this information had been reported previously to the Joint Legislative Budget Committee, but that responsibility has since ended. She mentioned that there was a lot of discussion when Representative Amanda Reeve met with the broader stakeholders group. Ms. Arnst indicated that the Committee may contact her at ADEQ with any questions regarding the forms.

Ms. Bauer stated that reporting is a good yearly reminder of the importance of keeping the PM-10 measures in place. She commented that three years of clean data are required for EPA to determine that the Maricopa County nonattainment area has met the standard. Ms. Bauer noted that after attainment is met, the area needs to maintain the standard to avoid being designated as nonattainment again. She added that she appreciates the efforts of the cities, the County, and the State agencies who are working together to prevent exceedances of the standard and keep the PM-10 measures in place. Ms. Bauer offered MAG assistance if needed.

Ms. Arnst added that agencies with off-highway vehicle enforcement, outreach, and responsibilities have a separate form that will be available on the ADEQ website. She mentioned that hard copies of the reporting forms have been distributed to the Dust Task Force. Ms. Arnst explained that ADEQ is responsible for submitting two forms as well. She stated that the ADEQ forms address general forecasting and the resources devoted to that forecasting, as well as, High Pollution Advisory days. Ms. Arnst indicated that the ADEQ forms will not be posted, but the information will be included in the consolidated reporting.

Chair Tveit inquired if the consolidated report would be online. Ms. Arnst responded that she would report back to the Committee on how the consolidated report may look. She mentioned that the report may be reviewed by the Committee before the final report is made public.

Jessica Koberna, Town of Gilbert, asked if the forms will to be sent electronically. Ms. Arnst replied that the forms will be sent to the City Managers and Intergovernmental City Liaisons.

7. Stage II Vapor Recovery and Onboard Refueling Vapor Recovery Widespread Use

Ms. Bauer presented information on Stage II vapor recovery and Onboard Refueling Vapor Recovery. She stated that under the Clean Air Act, Stage II vapor recovery nozzles and systems were mandated for use at gas stations. Ms. Bauer indicated that when Stage II was mandated, the vehicle manufacturing companies were also mandated to install Onboard Refueling Vapor Recovery devices on vehicles. These devices provide a similar function as the Stage II vapor recovery nozzles at gas stations. Ms. Bauer commented that the Clean Air Act allowed EPA, after a certain amount of time and vehicle turnover, to determine that the Onboard Refueling Vapor Recovery devices on passenger vehicles was in widespread use. EPA could then notify states that they may now evaluate the removal of Stage II vapor recovery at

gas stations, since they are redundant systems. Ms. Bauer noted that the use of both the Stage II vapor recovery systems at gas stations and the Onboard Refueling Vapor Recovery devices on vehicles at the same time can produce a disbenefit for air quality.

Ms. Bauer stated that the Arizona Department of Weights and Measures (ADWM) is the regulatory agency for Stage II vapor recovery. The ADWM has been coordinating with ADEQ, Maricopa County, and MAG on the implications of removing Stage II vapor recovery in the region. On November 30, 2012, the ADWM conducted a stakeholders workshop to explain the implications and provide various options.

Ms. Bauer discussed that this update has been provided to inform the Committee that ADWM, ADEQ, Maricopa County, and MAG are working together on this issue. She indicated that once the State determines which direction to take on this issue, the MAG Air Quality Plans for ozone may need to be revised. Ms. Bauer added that MAG will update the Committee regarding the potential revision. She mentioned that ADWM is currently reviewing the comments received at the stakeholder meeting.

8. Proposed Funding for an Air Quality Project for the MAG FY 2014 Work Program

Ms. Bauer discussed the proposed funding for an Air Quality Project for the MAG fiscal year (FY) 2014 Unified Planning Work Program. She mentioned that MAG is currently developing the Work Program and it is anticipated to be approved by the Regional Council in May 2013. Additional funding in the amount of \$130,000 is being proposed for the Air Quality Technical Assistance On-Call Project. In general, the Air Quality Technical Assistance On-Call Project is for technical assistance with the Eight-Hour Ozone Plan and supplemental technical analysis and information that may need to be provided for the MAG 2012 Five Percent Plan for PM-10. Ms. Bauer indicated that technical assistance may also be needed for air quality modeling; air quality monitoring and meteorology; exceptional events; traffic surveys and emissions inventories; dirt road inventories; statistical analysis of data; collection and analysis of field data; analysis of control measures; air quality plan preparation; Congestion Mitigation and Air Quality Improvement (CMAQ) evaluation methodologies; and transportation conformity. She commented that this project would be for next fiscal year.

Chair Tveit inquired how this additional funding applies to CMAQ or if the Air Quality Technical Assistance On-Call Project would be listed as a new project. Ms. Bauer responded that the Air Quality Technical Assistance On-Call Project would be listed as a new project. She stated that MAG is very transparent for the MAG member agencies. Ms. Bauer discussed that previously the MAG Work Program only included federal funding, which is common for many Council of Governments and Metropolitan Planning Organizations. She noted that the MAG member agencies commented that the MAG Work Program was hard to understand and should include all sources of funding. To minimize confusion, in the late 1990's MAG started organizing the Work Program similar to the member agencies. Ms. Bauer commented that this organization of the Unified Planning Work Program was more easily understood by the cities and towns since it lists all of the different sources of funding.

Ms. Arnst asked about the PM-2.5 Implementation Guidance remand. Ms. Bauer replied that this item is not on the agenda, however perhaps this topic may be discussed at the next meeting.

9. Call for Future Agenda Items

Chair Tveit requested suggestions for future agenda items. He indicated that the next meeting of the Committee has been tentatively scheduled for Thursday, February 28, 2013. With no further comments, the meeting was adjourned at 2:18 p.m.

DRAFT

**MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN
FOR THE MARICOPA COUNTY AREA**

FEBRUARY 2013



MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN FOR THE MARICOPA COUNTY AREA

Prepared by:



February 2013

Technical Assistance Provided By:

**Arizona Department of Environmental Quality
Arizona Department of Transportation
Maricopa County Air Quality Department
U.S. Environmental Protection Agency**

**MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN
FOR THE MARICOPA COUNTY AREA**

TABLE OF CONTENTS

<u>CHAPTER</u>		<u>PAGE</u>
ONE	INTRODUCTION	1-1
	OUTLINE OF THE MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN.....	1-1
TWO	CONTINUED ATTAINMENT OF THE CARBON MONOXIDE STANDARDS	2-1
	HISTORICAL PERSPECTIVE.....	2-1
	CARBON MONOXIDE MONITORING NETWORK.....	2-1
	MONITORING RESULTS AND CONTINUED ATTAINMENT DEMONSTRATION.....	2-2
	QUALITY ASSURANCE PROGRAM.....	2-2
THREE	MAINTENANCE PLAN	3-1
	MAINTENANCE PLAN CONTROL MEASURES.....	3-1
	EMISSIONS INVENTORIES.....	3-3
	MAINTENANCE DEMONSTRATION.....	3-5
	MONITORING NETWORK AND VERIFICATION OF CONTINUED ATTAINMENT.....	3-17
	CONTINGENCY PROVISIONS.....	3-19
	TRANSPORTATION CONFORMITY BUDGET.....	3-20
	SUBSEQUENT MAINTENANCE PLAN REVISIONS.....	3-22
	REFERENCES.....	3-23

**MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN
FOR THE MARICOPA COUNTY AREA**

LIST OF TABLES

<u>TABLE</u>	<u>PAGE</u>
2-1 2008 Carbon Monoxide Monitoring Data Summary for the Maricopa County Maintenance Area.....	2-3
2-2 2009 Carbon Monoxide Monitoring Data Summary for the Maricopa County Maintenance Area.....	2-4
2-3 2010 Carbon Monoxide Monitoring Data Summary for the Maricopa County Maintenance Area.....	2-5
2-4 2011 Carbon Monoxide Monitoring Data Summary for the Maricopa County Maintenance Area.....	2-6
3-1 Maintenance Measures in the 2013 Carbon Monoxide Maintenance Plan.	3-2
3-2 Average Weekday Emissions during the Winter Season in the Carbon Monoxide Modeling Domain.....	3-4
3-3 Average Weekday Emissions during the Winter Season in the Carbon Monoxide Maintenance Area.	3-4
3-4 Total Carbon Monoxide Emissions in the Carbon Monoxide Modeling Domain.....	3-10
3-5 UAM/CAL3QHC Maximum Eight-Hour Carbon Monoxide Concentration Adjustments and Scaled Estimates for 2025.....	3-10
3-6 Maximum CAL3QHC Eight-Hour Carbon Monoxide Concentrations in 2025.	3-12
3-7 Second Highest Eight-Hour Carbon Monoxide Concentrations at Monitors in Maricopa County for 1996-2011.....	3-13
3-8 Carbon Monoxide Monitoring Sites in Maricopa County.....	3-18

**MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN
FOR THE MARICOPA COUNTY AREA**

LIST OF FIGURES

<u>FIGURE</u>		<u>PAGE</u>
2-1.	Carbon Monoxide Maintenance Area and Carbon Monoxide Monitoring Sites.	2-7
2-2.	Carbon Monoxide Trends (2004-2011).	2-8
3-1.	2008 and 2025 Carbon Monoxide Emissions by Source Category for the Carbon Monoxide Modeling Domain.	3-6
3-2.	2008 and 2025 Carbon Monoxide Emissions by Source Category for the Carbon Monoxide Maintenance Area.	3-6
3-3.	Carbon Monoxide Modeling Domain and Maintenance Area.	3-8
3-4.	Historical One-Hour and Eight-Hour Carbon Monoxide Monitoring Data and Projections for the West Phoenix Monitoring Site.	3-14
3-5.	Normalized Diurnal Cycles of Wind Speed, Temperature, Mixing Height and Maximum Eight-Hour Carbon Monoxide Concentrations.	3-16

**MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN FOR THE MARICOPA
COUNTY AREA**

APPENDICES

APPENDIX A

Exhibit 1: 2008 Periodic Emissions Inventory for Carbon Monoxide for the Maricopa County, Arizona Maintenance Area. Maricopa County Air Quality Department. November 2012.

Exhibit 2: Technical Support Document in Support of the MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area. February 2013.

APPENDIX B

Exhibit 1: Public Hearing Process Documentation

Exhibit 2: Certification of Adoption

CHAPTER ONE

INTRODUCTION

The Maricopa County nonattainment area has attained the National Ambient Air Quality Standards for carbon monoxide and has been redesignated as a maintenance area by the Environmental Protection Agency (EPA). In 1978, the Governor of Arizona designated the Maricopa Association of Governments (MAG) as the lead air quality planning agency for Maricopa County in accordance with the Clean Air Act Section 174(a). Together with the State, MAG is responsible for determining which elements of the State Implementation Plan will be planned, implemented and enforced by State and local governments in Arizona. In 1992, the Arizona Legislature recertified MAG as the regional air quality planning agency in accordance with Section 174 of the 1990 Clean Air Act Amendments (A.R.S. Section 49-406A.). MAG coordinates with the Arizona Department of Environmental Quality, Arizona Department of Transportation, and the Maricopa County Air Quality Department in developing the plans necessary to attain and maintain the national standards.

There have been no violations of the one-hour carbon monoxide standard since 1984 and no violations of the eight-hour standard since 1996. The Revised MAG 1999 Serious Area Carbon Monoxide Plan demonstrated attainment by 2000 and was submitted to EPA in 2001. The MAG Carbon Monoxide Redesignation Request and Maintenance Plan demonstrated maintenance of the carbon monoxide standards through 2015 and was submitted to EPA in 2003. On March 9, 2005, EPA published final approval of the Serious Area Plan, Maintenance Plan, and redesignation of the Maricopa County area to attainment status, effective April 8, 2005.

Section 175A(b) of the Clean Air Act requires that eight years after redesignation of an area as an attainment area, an additional plan revision for maintaining the primary air quality standard for ten years after the expiration of the initial ten year period must be submitted to EPA. In accordance with the Clean Air Act, the MAG 2013 Carbon Monoxide Maintenance Plan has been prepared. The plan demonstrates continued maintenance of the carbon monoxide standards through 2025 with a maximum eight-hour concentration of 4.0 parts per million and establishes a 2025 motor vehicle emissions budget of 559.4 metric tons per day for the carbon monoxide maintenance area.

OUTLINE OF THE MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN

The purpose of this document is to present the MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area. The plan was prepared to address the relevant portions of the September 4, 1992 EPA memorandum entitled, "Procedures for Processing Requests to Redesignate Areas to Attainment" that are pertinent to maintenance plans.

The MAG 2013 Carbon Monoxide Maintenance Plan is composed of the following major sections:

1. Introduction (This Chapter) - Includes a general discussion of the prior Serious Area Plan and Maintenance Plan approvals, redesignation to attainment status, and the outline of the MAG 2013 Carbon Monoxide Maintenance Plan.
2. Continued Attainment of the Carbon Monoxide Standards - Includes the historical perspective; carbon monoxide monitoring network; monitoring results and continued attainment demonstration; and quality assurance program.
3. Maintenance Plan - Includes the maintenance plan control measures; emissions inventories; maintenance demonstration; monitoring network and verification of continued attainment; contingency provisions; transportation conformity budget; and subsequent maintenance plan revisions.

CHAPTER TWO

CONTINUED ATTAINMENT OF THE CARBON MONOXIDE STANDARDS

Attainment of the National Ambient Air Quality Standards for carbon monoxide (CO) is demonstrated when two consecutive years of monitoring data for each site show no more than one exceedance per year of the eight-hour (9 ppm) and one-hour (35 ppm) standards. The following information demonstrates that the Maricopa County maintenance area has continued to attain the national standards for carbon monoxide for the past 15 years. This is based on quality assured monitoring data representing all carbon monoxide monitoring locations in the maintenance area.

HISTORICAL PERSPECTIVE

Data from the regional monitoring network indicates that the Maricopa County maintenance area has not experienced a violation of the eight-hour standard for carbon monoxide since 1996. The last violation of the one-hour standard was recorded in 1984. In addition, both the frequency of exceedance days and the magnitude of observed CO concentrations have declined dramatically since air quality monitoring began in the late 1960's.

In contrast to the lack of eight-hour violations since 1996, eighty-six exceedance days were recorded in 1984. There was a noticeable decline in the number of exceedance days from 1984 through 1990. In 1994 through 1996 period, there were a total of eight exceedance days, three each in 1994 and 1995, and two in 1996. There were two violation sites in 1994 (West Indian School and West Phoenix sites), and one each in 1995 and 1996 (both at the Phoenix Grand Avenue microscale monitor). A single exceedance of the eight-hour standard occurred in 1999 at the Phoenix Grand Avenue site, but this one exceedance did not constitute a violation of the standard. There have been no exceedances of the CO standard since 1999.

The Maricopa County maintenance area has been in attainment of the National Ambient Air Quality Standards for carbon monoxide since 1997 and has had a continuous downward trend in concentrations. In the past ten years, the annual eight-hour maximum concentration has decreased by approximately 57 percent, from 7.5 ppm in 2001 to 3.2 ppm in 2011. Since 2008, the maximum eight-hour concentrations reported at the CO monitoring locations have been less than half of the 9 ppm standard (9.4 ppm due to rounding).

CARBON MONOXIDE MONITORING NETWORK

The ambient air monitoring network for carbon monoxide in the Maricopa County maintenance area consists of 12 State and Local Air Monitoring Stations (SLAMS). The Buckeye station is located west of the maintenance area in Maricopa County and also monitors carbon monoxide. Twelve of these sites are operated by the Maricopa County

Air Quality Department and one monitor is operated by the Arizona Department of Environmental Quality. The CO monitoring sites are identified, along with summary data from 2008 through 2011, in Tables 2-1 through 2-4. Figure 2-1 shows the geographical distribution of the regional monitoring network.

MONITORING RESULTS AND CONTINUED ATTAINMENT DEMONSTRATION

The monitoring data presented in Tables 2-1 through 2-4 verify that the Maricopa County maintenance area has remained in attainment of the national standards for carbon monoxide, in accordance with the federal requirements of 40 CFR 50.8. Data recovery rates for the monitors exceed the 75 percent completeness requirements for all years and all state and federal quality assurance procedures have been followed. Figure 2-2 illustrates the downward trend in the second-highest carbon monoxide concentrations at all monitors in the maintenance area.

QUALITY ASSURANCE PROGRAM

Carbon monoxide data for the Maricopa County area has been collected and quality-assured in accordance with 40 CFR, Part 58, Appendix A “Quality Assurance Requirements for SLAMS, SPMs, and PSD Air Monitoring” and EPA’s “Quality Assurance Handbook for Air Pollution Measurement Systems: Volume II: Ambient Air Quality Monitoring Program”. The data are recorded in the EPA Air Quality System and are available for public review through sources such as the EPA AirData website and air quality monitoring reports produced by the Maricopa County Air Quality Department and the Arizona Department of Environmental Quality.

TABLE 2-1

**2008 CARBON MONOXIDE MONITORING DATA SUMMARY
FOR THE MARICOPA COUNTY MAINTENANCE AREA
STANDARDS: 1-HOUR: 35 PPM; 8-HOUR: 9 PPM***

Site Name	1-Hour		8-Hour	
	Max ppm	2 nd Max ppm	Max ppm	2 nd Max ppm
Buckeye, 26449 W. 100 th Dr. ^{s+}	0.7	0.7	0.5	0.5
Central Phoenix, 1645 E. Roosevelt	3.6	3.5	2.6	2.2
Dysart, 16825 N. Dysart Rd. ^s	1.5	1.4	1.0	1.0
Glendale, 6001 W. Olive ^s	2.1	2.0	1.6	1.5
Greenwood, 1128 N. 27 th Ave.	3.0	3.0	2.7	2.4
JLG Supersite, 4530 N. 17 th Ave.	3.1	3.1	2.5	2.4
Mesa, 310 S. Brooks ^s	1.7	1.7	1.4	1.3
North Phoenix, 601 E. Butler Dr. ^s	2.1	2.0	1.3	1.3
South Phoenix, 33 W. Tamarisk Ave. ^s	3.7	3.2	2.2	2.0
South Scottsdale, 2857 N. Miller Rd. ^s	2.0	2.0	1.5	1.4
Tempe, 1525 S. College Ave. ^s	2.4	2.3	1.8	1.4
West Chandler, 275 S. Ellis ^s	1.8	1.7	1.4	1.4
West Indian School, 3315 W. Indian School Rd.	3.9	3.6	2.8	2.8
West Phoenix, 3847 W. Earll	4.7	4.5	3.1	3.0

* Due to mathematical rounding, values ≥ 35.5 and 9.5 ppm are necessary to exceed the standard.

^s Seasonal monitor operating September 1st to April 1st.

⁺ The Buckeye monitor is located outside the carbon monoxide maintenance area.

Sources: Environmental Protection Agency Air Quality System; Maricopa County Air Quality Department 2008-2011 Air Monitoring Network Reviews.

TABLE 2-2

**2009 CARBON MONOXIDE MONITORING DATA SUMMARY
FOR THE MARICOPA COUNTY MAINTENANCE AREA
STANDARDS: 1-HOUR: 35 PPM; 8-HOUR: 9 PPM***

Site Name	1-Hour		8-Hour	
	Max ppm	2 nd Max ppm	Max ppm	2 nd Max ppm
Buckeye, 26449 W. 100 th Dr. ^{s+}	1.2	1.1	0.6	0.5
Central Phoenix, 1645 E. Roosevelt	3.6	3.0	2.2	2.1
Dysart, 16825 N. Dysart Rd. ^s	1.0	0.9	0.9	0.8
Glendale, 6001 W. Olive ^s	2.0	1.9	1.3	1.2
Greenwood, 1128 N. 27 th Ave.	3.5	3.2	2.6	2.4
JLG Supersite, 4530 N. 17 th Ave.	2.9	2.8	2.3	2.3
Mesa, 310 S. Brooks ^s	2.0	1.9	1.5	1.3
North Phoenix, 601 E. Butler Dr. ^s	5.9	2.1	1.3	1.3
South Phoenix, 33 W. Tamarisk Ave. ^s	4.1	3.4	2.6	2.2
South Scottsdale, 2857 N. Miller Rd. ^s	2.9	1.9	1.4	1.4
Tempe, 1525 S. College Ave. ^s	4.0	3.6	2.9	2.1
West Chandler, 275 S. Ellis ^s	2.1	2.1	1.7	1.5
West Indian School, 3315 W. Indian School Rd.	5.6	5.0	4.2	3.3
West Phoenix, 3847 W. Earll	4.9	4.8	4.6	3.3

* Due to mathematical rounding, values ≥ 35.5 and 9.5 ppm are necessary to exceed the standard.

^s Seasonal monitor operating September 1st to April 1st.

⁺ The Buckeye monitor is located outside the carbon monoxide maintenance area.

Sources: Environmental Protection Agency Air Quality System; Maricopa County Air Quality Department 2008-2011 Air Monitoring Network Reviews.

TABLE 2-3

**2010 CARBON MONOXIDE MONITORING DATA SUMMARY
FOR THE MARICOPA COUNTY MAINTENANCE AREA
STANDARDS: 1-HOUR: 35 PPM; 8-HOUR: 9 PPM***

Site Name	1-Hour		8-Hour	
	Max ppm	2 nd Max ppm	Max ppm	2 nd Max ppm
Buckeye, 26449 W. 100 th Dr. ^{s+}	1.9	1.3	0.6	0.6
Central Phoenix, 1645 E. Roosevelt	3.2	3.2	2.4	2.2
Dysart, 16825 N. Dysart Rd. ^s	2.0	1.8	0.9	0.6
Glendale, 6001 W. Olive ^s	9.0	8.9	3.0	1.5
Greenwood, 1128 N. 27 th Ave.	4.3	3.9	3.0	2.3
JLG Supersite, 4530 N. 17 th Ave.	2.9	2.7	2.1	2.1
Mesa, 310 S. Brooks ^s	2.0	2.0	1.4	1.4
North Phoenix, 601 E. Butler Dr. ^s	2.9	2.4	1.7	1.6
South Phoenix, 33 W. Tamarisk Ave. ^s	4.4	4.3	3.1	3.1
South Scottsdale, 2857 N. Miller Rd. ^s	2.1	2.0	1.6	1.6
Tempe, 1525 S. College Ave. ^s	3.4	2.4	1.9	1.6
West Chandler, 275 S. Ellis ^s	2.0	2.0	1.9	1.6
West Indian School, 3315 W. Indian School Rd. (Closed June 30, 2010) [#]	3.7	3.3	2.3	2.3
West Phoenix, 3847 W. Earll	4.3	4.2	3.3	3.2

* Due to mathematical rounding, values ≥ 35.5 and 9.5 ppm are necessary to exceed the standard.

^s Seasonal monitor operating September 1st to April 1st.

[#] Less than 75 percent data available.

⁺ The Buckeye monitor is located outside the carbon monoxide maintenance area.

Sources: Environmental Protection Agency Air Quality System; Maricopa County Air Quality Department 2008-2011 Air Monitoring Network Reviews.

TABLE 2-4

**2011 CARBON MONOXIDE MONITORING DATA SUMMARY
FOR THE MARICOPA COUNTY MAINTENANCE AREA
STANDARDS: 1-HOUR: 35 PPM; 8-HOUR: 9 PPM***

Site Name	1-Hour		8-Hour	
	Max ppm	2 nd Max ppm	Max ppm	2 nd Max ppm
Buckeye, 26449 W. 100 th Dr. ^{s+}	1.8	1.2	0.9	0.8
Central Phoenix, 1645 E. Roosevelt	3.8	3.5	2.1	2.1
Dysart, 16825 N. Dysart Rd. ^s	1.0	0.9	0.5	0.5
Glendale, 6001 W. Olive ^s	1.9	1.8	1.3	1.2
Greenwood, 1128 N. 27 th Ave.	3.0	2.9	2.5	2.5
JLG Supersite, 4530 N. 17 th Ave. [#]	2.5	2.5	2.3	2.1
Mesa, 310 S. Brooks ^s	1.9	1.8	1.5	1.3
North Phoenix, 601 E. Butler Dr. ^s	2.9	2.7	1.6	1.5
South Phoenix, 33 W. Tamarisk Ave. ^s	3.0	2.9	2.6	2.0
South Scottsdale, 2857 N. Miller Rd. ^s	1.8	1.7	1.4	1.3
Tempe, 1525 S. College Ave. ^s	3.6	3.4	3.2	2.9
West Chandler, 275 S. Ellis ^s	1.8	1.7	1.4	1.3
West Phoenix, 3847 W. Earll	4.4	3.9	3.0	2.9

* Due to mathematical rounding, values ≥ 35.5 and 9.5 ppm are necessary to exceed the standard.

^s Seasonal monitor operating September 1st to April 1st.

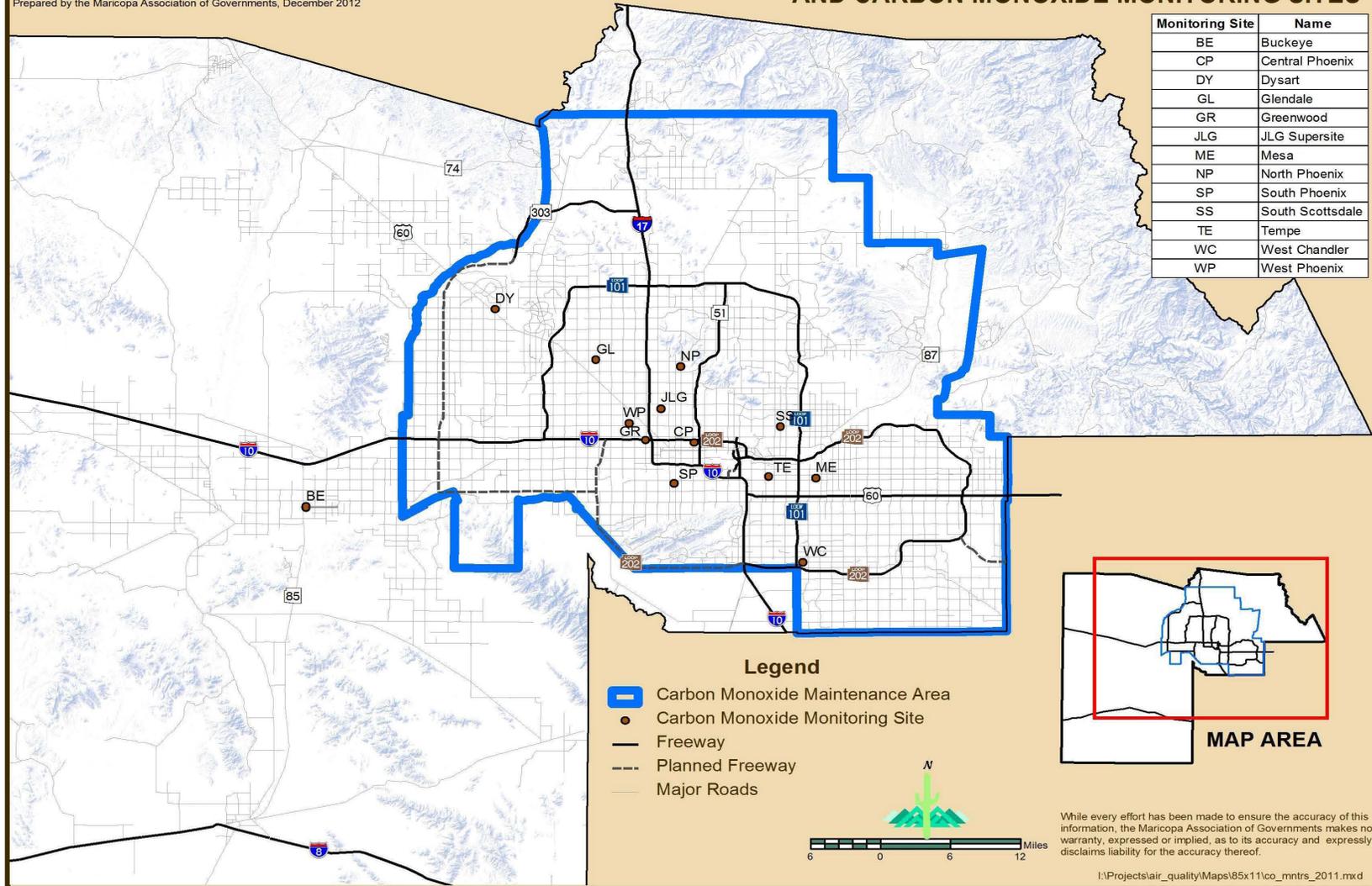
[#] Less than 75 percent data available.

⁺ The Buckeye monitor is located outside the carbon monoxide maintenance area.

Sources: Environmental Protection Agency Air Quality System; Maricopa County Air Quality Department 2008-2011 Air Monitoring Network Reviews.

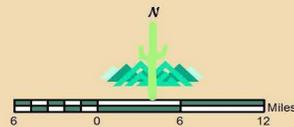
FIGURE 2-1

CARBON MONOXIDE MAINTENANCE AREA AND CARBON MONOXIDE MONITORING SITES



Monitoring Site	Name
BE	Buckeye
CP	Central Phoenix
DY	Dysart
GL	Glendale
GR	Greenwood
JLG	JLG Supersite
ME	Mesa
NP	North Phoenix
SP	South Phoenix
SS	South Scottsdale
TE	Tempe
WC	West Chandler
WP	West Phoenix

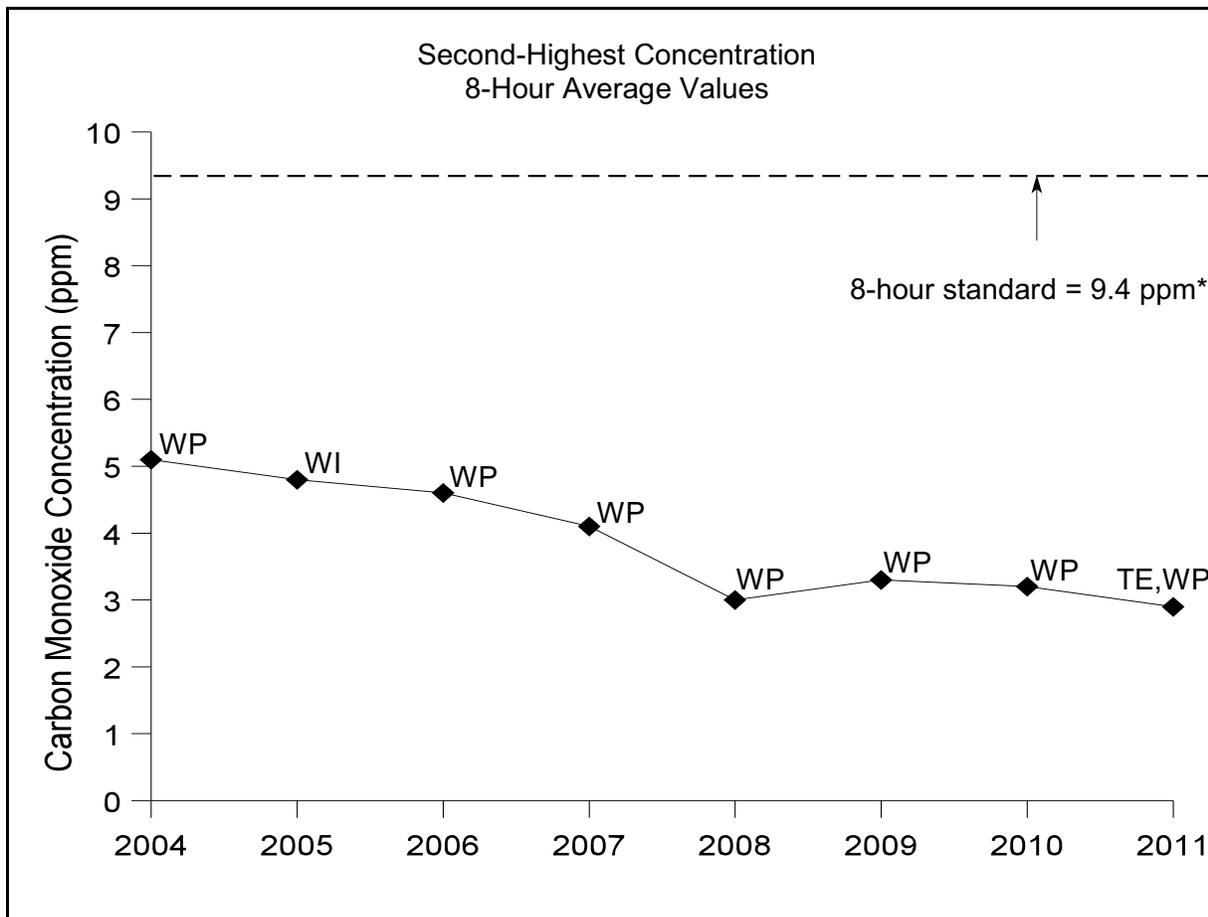
- Legend**
- Carbon Monoxide Maintenance Area
 - Carbon Monoxide Monitoring Site
 - Freeway
 - Planned Freeway
 - Major Roads



While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

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FIGURE 2-2
CARBON MONOXIDE TRENDS
(2004-2011)



* Due to mathematical rounding, values ≥ 9.5 ppm are necessary to exceed the standard.

Monitors Where the Second-Highest Reading Occurred

- (TE) Tempe
- (WI) West Indian School Road
- (WP) West Phoenix

Source: Environmental Protection Agency Air Quality System.

CHAPTER THREE

MAINTENANCE PLAN

No violation of the one-hour National Ambient Air Quality Standard for carbon monoxide has occurred in Maricopa County since 1984 and no violation of the eight-hour carbon monoxide standard has been recorded at any monitor since 1996. The Revised MAG 1999 Serious Area Carbon Monoxide Plan for the Maricopa County Nonattainment Area was submitted to the Environmental Protection Agency (EPA) in 2001 (MAG, 2001). The Carbon Monoxide Redesignation Request and Maintenance Plan for the Maricopa County Nonattainment Area was submitted to EPA in 2003 (MAG, 2003).

The Revised 1999 Serious Area Carbon Monoxide Plan demonstrated attainment of the carbon monoxide standards by 2000. The 2003 Carbon Monoxide Maintenance Plan demonstrated continued maintenance of the carbon monoxide standards through 2015. EPA approved the Revised 1999 Serious Area Carbon Monoxide Plan and the 2003 Carbon Monoxide Maintenance Plan and redesignated the Maricopa County area to attainment, effective April 8, 2005 (EPA, 2005).

Section 175A(b) of the Clean Air Act Amendments states that *“8 years after redesignation of any area as an attainment area under section 107(d), the State shall submit to the Administrator an additional revision of the applicable State implementation plan for maintaining the national primary ambient air quality standard for 10 years after the expiration of the initial 10-year period”*. Thus, a second carbon monoxide maintenance plan for the years 2016 through 2025 for the Maricopa county area is required for submittal to EPA by April 8, 2013.

This second carbon monoxide maintenance plan (hereafter referred to as the 2013 CO Maintenance Plan) demonstrates maintenance of the National Ambient Air Quality Standards for carbon monoxide in the Maricopa County area through 2025 and establishes a 2025 conformity budget for onroad mobile source emissions using the latest version of the EPA Motor Vehicle Emission Simulator (MOVES) model, MOVES2010b. The 2008 Periodic Emissions Inventory for Carbon Monoxide for the Maricopa County, Arizona Maintenance Area is also included in Appendix A, Exhibit 1.

MAINTENANCE PLAN CONTROL MEASURES

The Maricopa County area will continue to implement the maintenance measures in the 2003 Carbon Monoxide Maintenance Plan. The first nine measures in Table 3-1 were used for numeric credit in demonstrating maintenance of the carbon monoxide standards through 2015. These measures are described in Chapter Two of the 2003 CO Maintenance Plan. The tenth measure, Expansion of Area A Boundaries, was one of three contingency measures in the 2003 Carbon Monoxide Maintenance Plan. This measure is described in Section VII-2-2 of the Technical Support Document in Appendix A, Exhibit

**TABLE 3-1
MAINTENANCE MEASURES IN THE 2013 CARBON MONOXIDE MAINTENANCE
PLAN**

- | | |
|-----|--|
| 1. | California Phase 2 Reformulated Gasoline with 3.5% Oxygen Content From November 1 Through March 31 |
| 2. | Off-Road Vehicle and Engine Standards |
| 3. | Phased-In Emission Test Cutpoints |
| 4. | One-time Waiver from Vehicle Emissions Test |
| 5. | Defer Emissions Associated with Government Activities |
| 6. | Coordinate Traffic Signal Systems |
| 7. | Develop Intelligent Transportation Systems |
| 8. | Tougher Enforcement of Vehicle Registration and Emissions Test Compliance |
| 9. | Clean Burning Fireplace Ordinances |
| 10. | Expansion of Area A Boundaries |

2 of the 2003 Carbon Monoxide Maintenance Plan (MAG, 2003). The reason for converting this measure from contingency to maintenance in the 2013 Carbon Monoxide Maintenance Plan is discussed below.

In November 2012, EPA proposed to approve the 110(l) SIP revision submitted by the Arizona Department of Environmental Quality (ADEQ, 2009; ADEQ, 2011) that will eliminate the requirement for motorcycles to participate in the Arizona vehicle emissions inspection and maintenance (VEI) program (EPA, 2012a). EPA has indicated that the benefits of the contingency measure, Expansion of Area A Boundaries, in the 2003 Carbon Monoxide Maintenance Plan may be used to offset the increase in emissions attributable to the exemption of motorcycles from the VEI program. Like other contingency measures in the 2013 CO Maintenance Plan, this measure was implemented early, in accordance with EPA guidance (EPA, 1993).

Therefore, the Expansion of Area A Boundaries is included as a maintenance measure in the 2013 Carbon Monoxide Maintenance Plan. As discussed in the Contingency Provisions section of this chapter, ADEQ has made a commitment to re-institute the VEI program requirement for motorcycles, if there is a future violation of the carbon monoxide standard.

EMISSIONS INVENTORIES

The emissions inventories used in performing the maintenance demonstration are presented in Table 3-2, for 2006, 2008, 2015 and 2025 in the carbon monoxide modeling domain, and Table 3-3, for 2008 and 2025 in the CO maintenance area. The 2008 emissions in both tables are based on the latest periodic emissions inventory (PEI) for carbon monoxide (CO) contained in Appendix A, Exhibit 1 (MCAQD, 2012). The PEI estimates CO emissions for a typical weekday during the winter months, November - January.

Emission reduction credit for two measures in Table 3-1, California Phase 2 Reformulated Gasoline and Off-Road Vehicle and Engine Standards, is reflected in the emissions inventories shown in Tables 3-2 and 3-3. The EPA MOVES2010b model estimates that California Phase 2 Reformulated Gasoline will reduce CO emissions by 128.9 metric tons per day in 2025, a reduction in CO maintenance area emissions of about 17 percent. The EPA NONROAD2008a model estimates that Off-Road Vehicle and Engine Standards will reduce CO emissions by 15.0 metric tons per day in 2025, which represents a two percent reduction in CO maintenance area emissions.

While other maintenance measures in Table 3-1 will continue to be implemented, their collective carbon monoxide reduction impact in 2025 is anticipated to be less than one percent. Therefore, no numeric credit has been taken for these measures in the maintenance demonstration. In addition to Reformulated Gasoline and Off-Road Vehicle and Engine Standards, the maintenance demonstration in this plan is dependent upon the emission reduction benefits of tighter federal emission standards for new onroad and nonroad engines, fuel requirements, and continuing fleet turnover to lower emissions from onroad and nonroad vehicles. These emission reduction benefits are reflected in the onroad and nonroad emissions shown in Tables 3-2 and 3-3.

**TABLE 3-2
AVERAGE WEEKDAY EMISSIONS DURING THE WINTER SEASON
IN THE CARBON MONOXIDE MODELING DOMAIN**

Source Category	CO Emissions (metric tons/day)			
	2006	2008	2015	2025
Point	0.4	0.7	18.0	18.0
Area	26.4	25.8	29.6	33.1
Nonroad	227.1	187.0	133.1	129.4
Onroad	549.1	410.0	297.9	223.4
Total	803.0	623.5	478.6	403.9

**TABLE 3-3
AVERAGE WEEKDAY EMISSIONS DURING THE WINTER SEASON
IN THE CARBON MONOXIDE MAINTENANCE AREA**

Source Category	CO Emissions (metric tons/day)	
	2008	2025
Point	0.7	19.8
Area	37.8	47.3
Nonroad	281.5	213.1
Onroad	581.6	359.4
Total	901.6	639.6

The data used to derive growth factors for estimating point and area source emissions were derived from the MAG Socioeconomic Projections of Population, Housing and Employment by Municipal Planning Area and Regional Analysis Zone in Maricopa County (MAG, 2007). These projections, which cover the period 2010 through 2030, are based on the 2005 Special U.S. Census conducted in Maricopa County and were approved by the MAG Regional Council in May 2007.

Onroad mobile source emissions for the 2013 Carbon Monoxide Maintenance Plan were estimated using the MOVES2010b model and traffic assignment data output by the MAG TransCAD travel demand model. The socioeconomic projections adopted by the MAG Regional Council in 2007 were also used as input to the travel demand model.

Nonroad equipment emissions were developed with the EPA NONROAD2008a model, using default NONROAD2008a activity growth rates for Maricopa County, with one exception. Equipment population and activity levels for commercial lawn and garden equipment were based on a survey performed as part of Cap and Trade Oversight Committee work (ENVIRON, 2003).

The Emissions and Dispersion Modeling System (EDMS) and Federal Aviation Administration Terminal Area Forecast system database were used to estimate future emissions for all airports, except Luke Air Force Base (AFB). Luke AFB emissions were derived from the 2008 Mobile Source Emissions Inventory for Luke AFB (Weston, 2010) and the F-35A Training Basing Environmental Impact Statement (USAF, 2012).

Details regarding the technical inputs and assumptions used in preparing the emissions inventories are provided in Chapter II of the TSD (Appendix A, Exhibit 2). The percentage contributions of CO emissions by source category are illustrated in Figures 3-1 and 3-2 for the CO modeling domain and maintenance area, respectively.

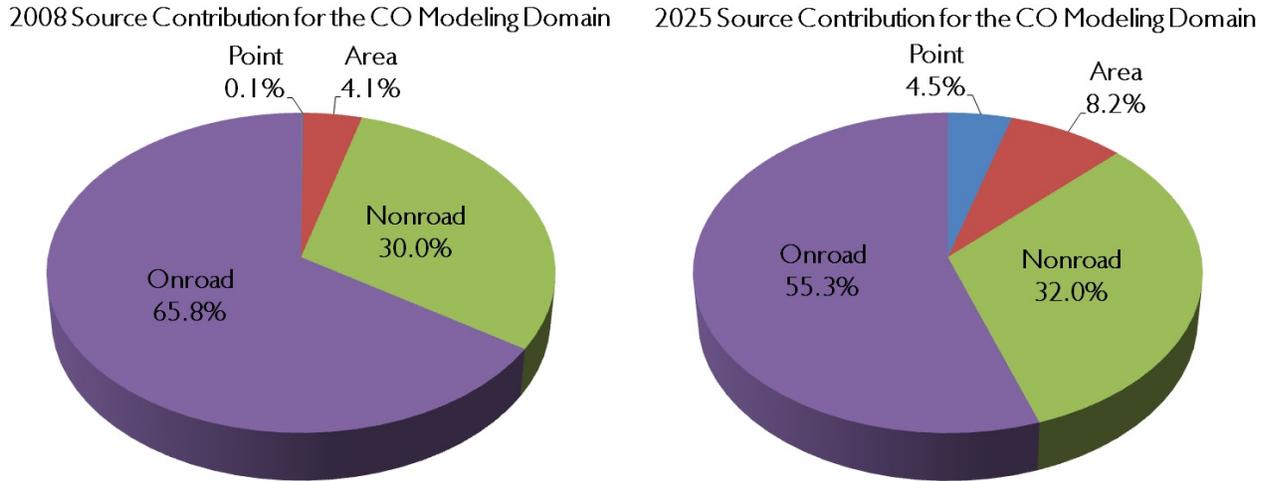
MAINTENANCE DEMONSTRATION

The 2013 Carbon Monoxide Maintenance Plan relies on a series of technical analyses to demonstrate maintenance of the National Ambient Air Quality Standards for carbon monoxide through 2025. The maintenance demonstration assumes that the measures in Table 3-1 will continue to be implemented through 2025.

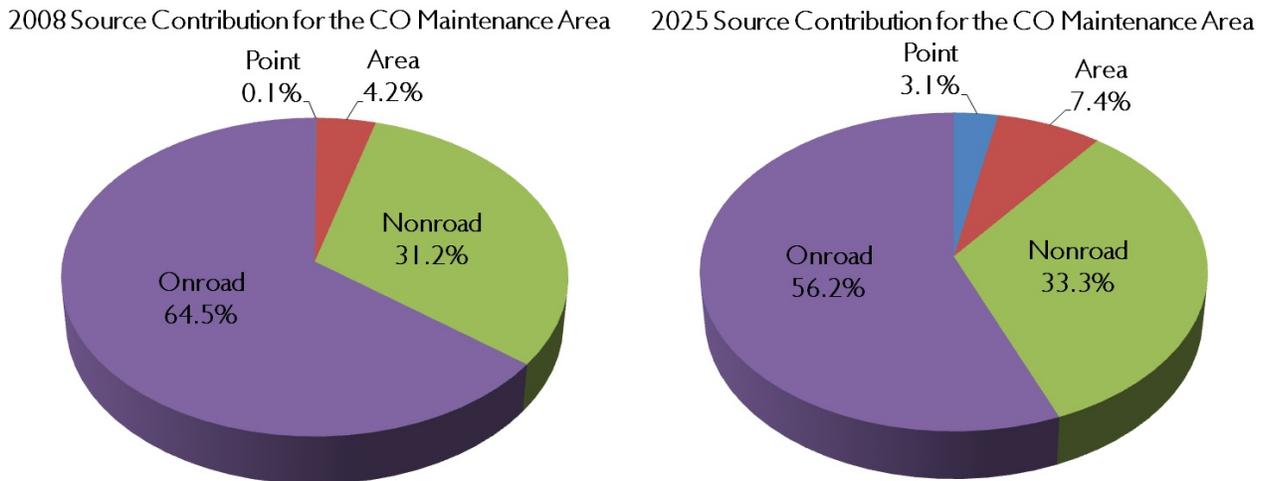
Three different modeling analyses were performed to estimate the effects of growth and emission reduction strategies on future carbon monoxide concentrations in the Maricopa County area. In addition, two weight of evidence evaluations were conducted using actual trends in air quality and meteorological data to reinforce the modeling analyses. The results of these five quantitative assessments provide assurance that there will continue to be compliance with the federal carbon monoxide standards through 2025.

A modeling protocol was developed to detail the technical approaches and assumptions to be used in demonstrating maintenance of the federal standards for carbon monoxide. The modeling protocol is contained in Appendix I of the Technical Support Document for the 2013 CO Maintenance Plan (TSD), contained in Appendix A, Exhibit 2.

**FIGURE 3-1
2008 AND 2025 CARBON MONOXIDE EMISSIONS BY SOURCE CATEGORY FOR
THE CARBON MONOXIDE MODELING DOMAIN**



**FIGURE 3-2
2008 AND 2025 CARBON MONOXIDE EMISSIONS BY SOURCE CATEGORY FOR
THE CARBON MONOXIDE MAINTENANCE AREA**



For the maintenance demonstration, two sets of carbon monoxide emissions inventories were developed representing: (1) the carbon monoxide modeling domain in 2006, 2008, 2015, and 2025 and (2) the carbon monoxide maintenance area in 2008 and 2025. The carbon monoxide modeling domain and maintenance area are illustrated in Figure 3-3. The modeling domain covers 792 square miles, while the maintenance area represents 1,814 square miles. Both of these areas are located within Maricopa County.

The 2008 Periodic Emissions Inventory for Carbon Monoxide in the Maricopa County Maintenance Area is provided in Appendix A, Exhibit 1 (MCAQD, 2012). This inventory was used to establish the 2008 base case emissions, back-cast the 2006 emissions, and project the 2015 and 2025 future emissions with control measures in place.

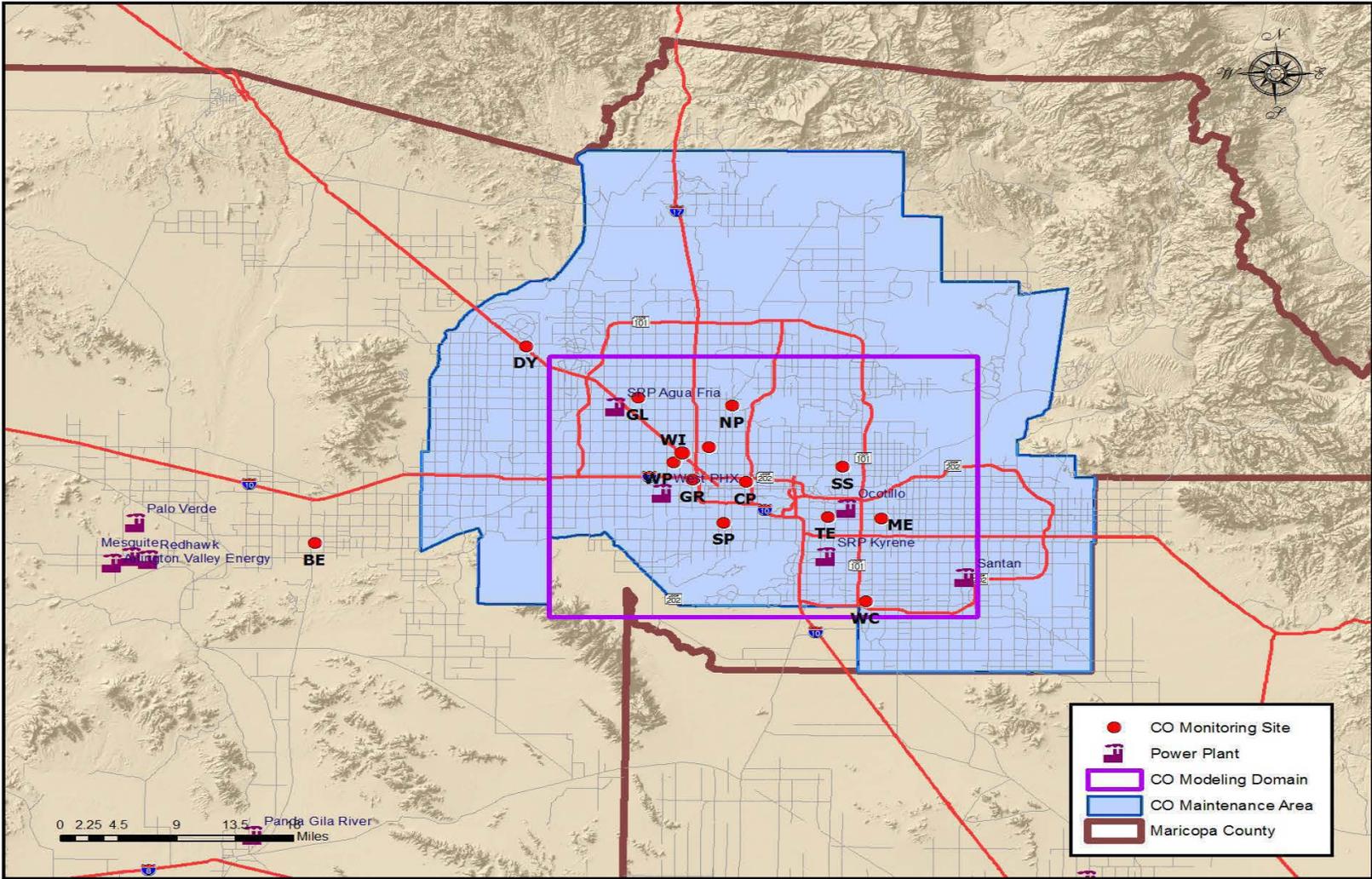
The modeling for the 2013 CO Maintenance Plan was conducted using three approaches: (1) an emissions inventory comparison, (2) a scaling of the Urban Airshed Model/CAL3QHC maximum concentration, and (3) a CAL3QHC intersection hotspot analysis. The first approach demonstrates maintenance of the standard by showing a continuing decrease in emissions levels in 2015 and 2025 compared with emissions levels in 2006 and 2008. The second approach scales the UAM/CAL3QHC maximum eight-hour concentrations for 2006 and 2015 derived from the 2003 CO Maintenance Plan based on the ratio of future year to base year total anthropogenic carbon monoxide emissions. The scaled UAM/CAL3QHC maximum concentration in 2025 was used to demonstrate maintenance of the eight-hour carbon monoxide standard.

In the third approach, CAL3QHC modeling was performed for six intersections which are expected to experience the heaviest traffic volumes and congestion in 2025. The CAL3QHC maximum eight-hour CO concentration projected for each intersection was added to the estimated background concentration for 2025. The combined background and CAL3QHC maximum eight-hour concentration at each intersection was also used to demonstrate maintenance of the eight-hour carbon monoxide standard in 2025.

In addition to the three modeling approaches described above, two weight of evidence analyses were performed to demonstrate maintenance through 2025. These include an evaluation of historical one-hour and eight-hour carbon monoxide concentration trends at monitoring sites and a regional meteorological analysis. For the first weight of evidence analysis, historical CO concentration trends for each monitoring site were developed and the trend was extended to 2015 and 2025 using regression analysis. For the second weight of evidence approach, a meteorological analysis was performed to demonstrate that the historical improvements in CO concentrations in the Maricopa County area are not due to unusually favorable meteorological conditions.

Summaries of the five technical analyses conducted as part of the maintenance demonstration are described in the subsections that follow. Details regarding these analyses and underlying technical assumptions are documented in Section IV of the TSD (Appendix A, Exhibit 2).

**FIGURE 3-3
CARBON MONOXIDE MODELING DOMAIN AND MAINTENANCE AREA**



Emissions Inventory Comparison

The emissions in the carbon monoxide modeling domain shown in Table 3-2 were estimated using the latest emissions models and planning assumptions. Table 3-4 compares the total 2006 and 2015 CO emissions in Table 3-2 with emissions derived with older models and assumptions as part of the 2003 CO Maintenance Plan. In order to estimate the maximum eight-hour CO concentration in 2025, the maximum concentration in 2006 of 5.3 ppm at the West Indian School monitor was multiplied by the ratio of 403.9 metric tons per day in 2025 divided by 803.0 tons per day in 2006. This results in an estimated maximum eight-hour concentration in the CO modeling domain of 2.7 parts per million (ppm) in 2025.

Table 3-3 indicates that total emissions in the CO maintenance area are 639.6 metric tons per day in 2025 and 901.6 metric tons per day in 2008. Applying this ratio to the maximum eight-hour CO concentration of 3.1 ppm at the West Phoenix monitor in 2008, results in an estimated maximum eight-hour CO concentration of 2.2 ppm in 2025. These two emissions inventory comparisons reveal that the maximum concentration will remain well below the eight-hour standard of 9 ppm in both the CO modeling domain and the CO maintenance area through 2025.

Scaled UAM/CAL3QHC Maximum Eight-Hour Concentrations

In the MAG 2003 CO Maintenance Plan, the eight-hour carbon monoxide concentrations in the modeling domain were estimated for the years 2006 and 2015 using the EPA-approved Urban Airshed Model (UAM) and intersection hotspot model (CAL3QHC). Since the UAM/CAL3QHC predictions were derived from the emissions inventories based on older versions of models (e.g., MOBILE6) available at the time the MAG 2003 CO Maintenance Plan was developed, emissions inventories for the years 2006 and 2015, as well as the maintenance year 2025, were newly developed, as shown in Table 3-4, using the latest versions of models and updated input data. The UAM/CAL3QHC projections for the years 2006 and 2015 were adjusted by the ratio of the new to old emissions inventory totals. The adjusted 2006 and 2015 UAM/CAL3QHC estimates from the MAG 2003 CO Maintenance Plan were scaled for the maintenance year 2025.

Although the Phoenix Grand Avenue and West Indian School monitors were deactivated in 1993 and 2010, respectively, modeling conducted for the Revised MAG 1999 Serious Area CO Plan (MAG, 2001) and the MAG 2003 CO Maintenance Plan (MAG, 2003) projected that these monitored intersections would have some of the highest levels of traffic congestion and CO concentrations in future years. In addition, the West Indian School monitor recorded the peak CO concentration of 10.5 ppm during the 1994 episode that was modeled in both plans. The adjusted and scaled maximum concentrations for these two intersections, as well as the highest eight-hour CO concentrations predicted by UAM/CAL3QHC in the modeling domain, are shown in Table 3-5. The scaled maximum UAM/CAL3QHC eight-hour CO concentration for 2025 is 4.0 ppm, which is less than half the eight-hour CO standard of 9 ppm.

**TABLE 3-4
TOTAL CARBON MONOXIDE EMISSIONS IN THE CARBON MONOXIDE MODELING
DOMAIN**

Source	Total CO Emissions (metric tons/day)		
	2006	2015	2025
2003 CO Maintenance Plan	912.3	901.2	N/A
2013 CO Maintenance Plan	803.0	478.6	403.9

**TABLE 3-5
UAM/CAL3QHC MAXIMUM EIGHT-HOUR CARBON MONOXIDE CONCENTRATION
ADJUSTMENTS AND SCALED ESTIMATES FOR 2025**

(units = ppm)

	2006		2015		2025	
	UAM/ CAL3QHC	Adjusted	UAM/ CAL3QHC	Adjusted	Based on 2006	Based on 2015
WI Monitor*	7.28	6.41	6.59	3.50	3.22	2.95
WI Receptor #9	8.25	7.26	8.08	4.29	3.65	3.62
WI Receptor #8	8.08	7.11	7.84	4.16	3.58	3.51
WI Receptor #20	7.85	6.91	7.44	3.95	3.48	3.33
PHGA Monitor**	N/A	N/A	N/A	N/A	N/A	N/A
PHGA Receptor #30	8.24	7.25	7.81	4.15	3.65	3.50
PHGA Receptor #46	8.08	7.11	7.45	3.96	3.58	3.34
PHGA Receptor #29	8.03	7.07	7.39	3.92	3.56	3.31
UAM/CAL3QHC Maximum	8.92	7.85	8.06	4.28	3.95 (rounded to 4.0)	3.61

WI = West Indian School
PHGA = Phoenix Grand Avenue

*The WI Monitor was deactivated on June 30, 2010

**The PHGA monitor values were not available (N/A) for the 1994 episode modeled with UAM/CAL3QHC (MAG, 2001; MAG, 2003), because the monitor was deactivated on March 31, 1993, due to impending reconstruction of the adjacent intersection.

*** The UAM/CAL3QHC maximum was rounded to one decimal place.

Intersection Hotspot Analysis

The three intersections projected to have the highest traffic volumes and the three intersections projected to have the worst traffic congestion were identified using the MAG TransCAD traffic assignment for the year 2025. Detailed data sets were collected for each of the six intersections and they were modeled using CAL3QHC to determine the maximum eight-hour CO concentration in 2025. The modeling input assumptions and results are detailed in Section III of the TSD (Appendix A, Exhibit 2). The background eight-hour CO concentration used for all intersections was determined to be 1.3 ppm. The maximum eight-hour CO concentration in 2025, which is the sum of the intersection maximum impact and the background concentration, was projected to be 1.7 ppm at two intersections: 16th Street and Camelback Road and Priest Drive and Southern Avenue, as shown in Table 3-6. The results from the CAL3QHC intersection hotspot analysis support the conclusion that high traffic volumes and congestion will not contribute to exceedances of the eight-hour carbon monoxide standard in 2025.

Continued Monitored Attainment

In addition to the three modeling analyses described above, MAG conducted two weight of evidence evaluations to support the maintenance demonstration. The first of these assessed the historical trends in one-hour and eight-hour concentrations measured at carbon monoxide monitors in the Maricopa County area. To demonstrate attainment, carbon monoxide concentrations at each monitor should not exceed the one-hour standard of 35 ppm more than once per year for two consecutive years. In addition, the eight-hour standard of 9 ppm can not be exceeded more than once per year for two consecutive years.

The trends in the second-highest eight-hour carbon monoxide concentrations at eighteen monitors for the years 1996 - 2011 are shown in Table 3-7. Similar tables showing the highest and second-highest one-hour CO concentrations and highest eight-hour CO concentrations recorded at these eighteen monitors are shown in Section IV-3-1 of the TSD (Appendix A, Exhibit 2). The one-hour carbon monoxide standard has not been violated at any monitor since 1984. The highest and second highest one-hour CO concentrations at all monitors in 2011 were 4.4 ppm and 3.9 ppm, respectively.

The second-highest eight-hour carbon monoxide concentration of 10.0 ppm was recorded at the Grand Avenue monitor in 1996. Since then, no monitor has violated the eight-hour CO standard. Eight-hour CO concentrations have continued to decline over the past decade. The highest and second highest eight-hour CO concentrations in 2011 were 3.2 ppm and 2.9 ppm, respectively.

To predict future concentrations based on the historical monitored carbon monoxide concentrations, a regression analysis was performed using data recorded at fourteen CO monitors for the period 1980 to 2011. The regression equations were used to project carbon monoxide concentrations to 2015 and 2025. Figure 3-4 shows the historical and projected

**TABLE 3-6
MAXIMUM CAL3QHC EIGHT-HOUR CARBON MONOXIDE CONCENTRATIONS
IN 2025**

(units = ppm)

Intersection	CAL3QHC Maximum One-Hour CO Concentration	Maximum Eight-Hour CO Concentration	Background CO Concentration	Total Maximum Eight-Hour CO Concentration
16 th St & Camelback Rd	0.5	0.4	1.3	1.7
107 th Ave & Grand Ave	0.4	0.3		1.6
Priest Dr & Southern Ave	0.5	0.4		1.7
7 th Ave & Van Buren St	0.4	0.3		1.6
Germann Rd & Gilbert Rd	0.4	0.3		1.6
Thomas Rd & 27 th Ave	0.4	0.3		1.6

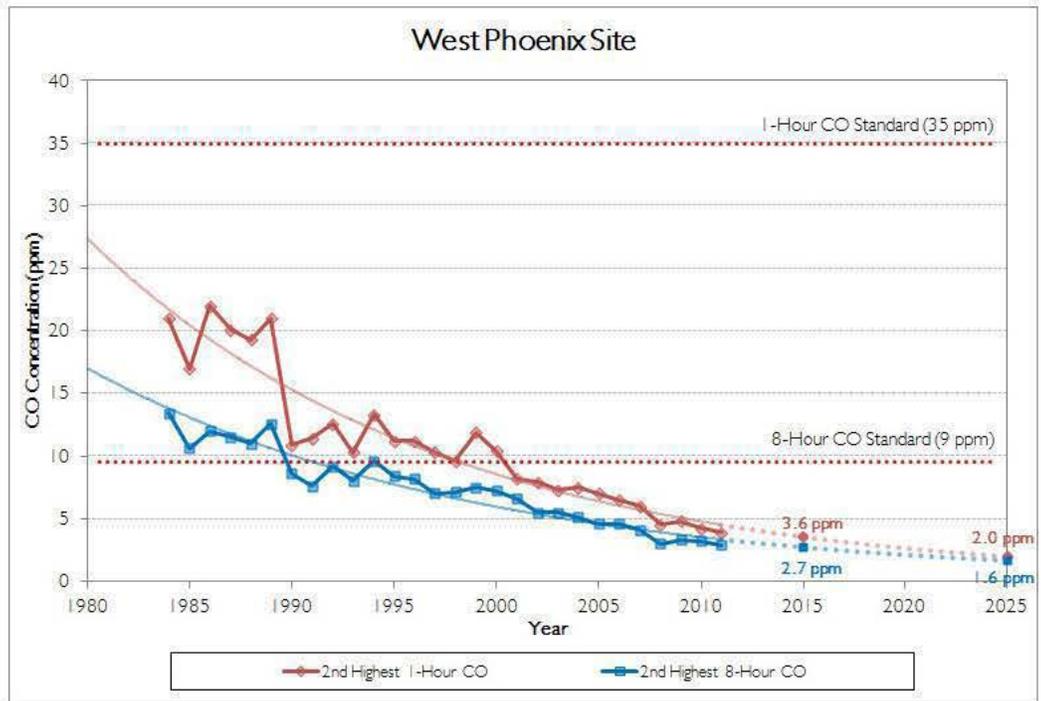
**TABLE 3-7
SECOND HIGHEST EIGHT-HOUR CARBON MONOXIDE CONCENTRATIONS AT MONITORS IN MARICOPA COUNTY
FOR 1996-2011**

(units = ppm)

Site ID	Site Name	Abbr	2 nd highest non-overlapping 8-hour CO concentrations															
			1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
04-013-0013	South Phoenix (old)*	SP	5.1	4.4	4.7	4.1												
04-013-0016	W Indian School Rd	WI	8.3	7.2	8.1	7.6	6.8	6.0	5.4	5.3	4.6	4.8	4.5	3.9	2.8	3.3	2.3	
04-013-0019	West Phoenix	WP	8.2	7.0	7.1	7.5	7.2	6.6	5.5	5.5	5.1	4.6	4.6	4.1	3.0	3.3	3.2	2.9
04-013-0022	Grand Ave	GA	10.0	7.8	6.8	8.1	6.0	6.2	5.5									
04-013-1003	Mesa	ME	3.8	4.5	3.7	4.0	3.2	2.7	3.5	2.2	1.7	2.4	2.0	2.0	1.3	1.3	1.4	1.3
04-013-1004	North Phoenix	NP	3.7	3.4	5.6	3.5	3.1	2.5	2.7	2.1	2.0	2.2	1.9	1.6	1.3	1.3	1.6	1.5
04-013-2001	Glendale	GL	3.7	3.0	3.4	3.5	3.2	2.8	2.7	2.3	2.1	2.3	1.8	1.6	1.5	1.2	1.5	1.2
04-013-3002	Central Phoenix	CP	7.5	7.2	6.3	6.0	5.2	4.1	4.1	3.8	3.3	3.8	3.2	2.9	2.2	2.1	2.2	2.1
04-013-3003	South Scottsdale	SS	4.9	4.2	3.5	4.1	3.1	3.1	2.8	2.2	2.4	2.4	1.9	1.6	1.4	1.4	1.6	1.3
04-013-3005	Gilbert	GI		2.2	2.7	2.4	2.0											
04-013-3006	Maryvale	MA		6.3	5.9	6.7	7.0	5.3	5.0	4.1	2.9							
04-013-3009	West Chandler (old)*	WC		2.7	2.7	2.8	2.3											
04-013-3010	Greenwood	GR		6.9	6.8	6.7	5.6	4.6	5.1	5.1	4.3	4.1	3.5	3.0	2.4	2.4	2.3	2.5
04-013-4003	South Phoenix (new)*	SP				4.4	4.8	3.4	3.7	3.3	3.3	3.2	2.7	2.3	2.0	2.2	3.1	2.0
04-013-4004	West Chandler (new)*	WC					2.2	2.1	2.2	2.6	2.1	2.0	2.0	1.5	1.4	1.5	1.6	1.3
04-013-4005	Tempe	TE					3.2	3.1	3.4	2.4	1.7	2.4	2.4	1.9	1.4	2.1	1.6	2.9
04-013-4007	Surprise	SU						1.1	1.1	0.8								
04-013-4010	Dysart	DY								1.1	1.1	1.2	0.8	1.3	1.0	0.8	0.6	0.5
04-013-4011	Buckeye	BE									0.4	0.9	0.6	0.8	0.5	0.5	0.6	0.8
04-013-9997	Super Site	SUPR				6.5	6.5	5.2	4.2	4.2	4.0	3.6	2.9	2.9	2.4	2.3	2.1	2.1
Maximum			10.0	7.8	8.1	8.1	7.2	6.6	5.5	5.5	5.1	4.8	4.6	4.1	3.0	3.3	3.2	2.9

* South Phoenix and West Chandler monitors (old) were relocated to the new South Phoenix and West Chandler sites in 1999 and 2000, respectively.

**FIGURE 3-4
 HISTORICAL ONE-HOUR AND EIGHT-HOUR CARBON MONOXIDE MONITORING
 DATA AND PROJECTIONS FOR THE WEST PHOENIX MONITORING SITE**



trends in the second-highest one-hour and eight-hour CO concentrations at the West Phoenix monitor. The West Phoenix site has the highest projected eight-hour CO concentrations of 2.7 ppm in 2015 and 1.6 ppm in 2025. Similar graphs for the other thirteen monitors are provided in Section IV-3-1 of the TSD (Appendix A, Exhibit 2). The projected carbon monoxide concentrations based on historical data provide additional evidence that the Maricopa County area will continue to maintain the one-hour and eight-hour standards through 2025.

Meteorological Analysis

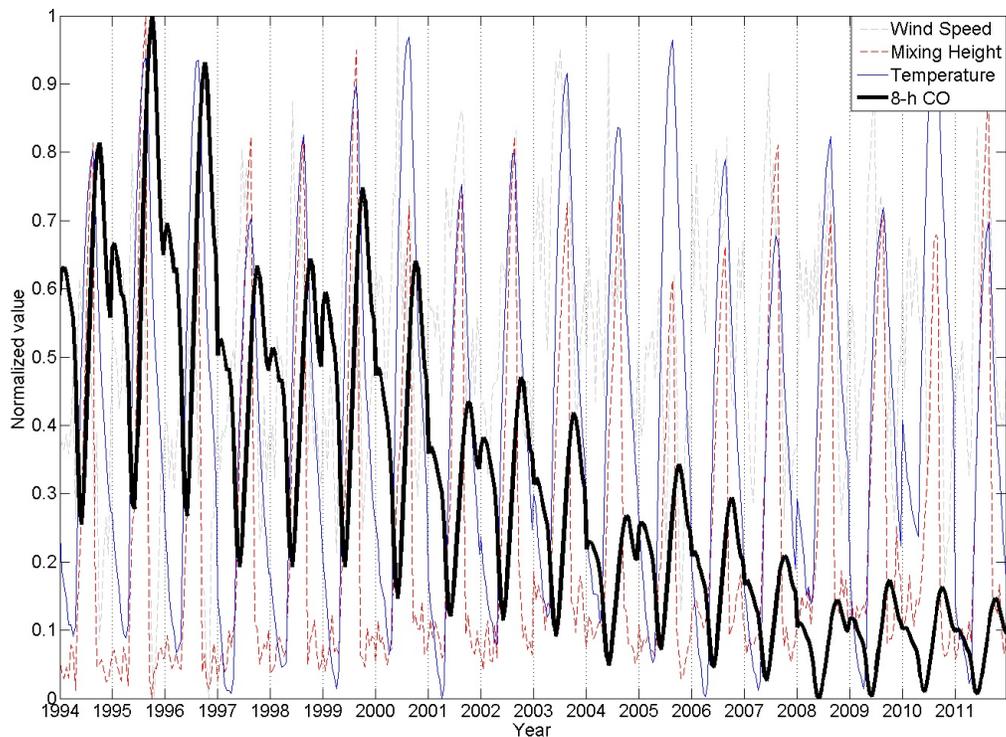
A meteorological analysis was performed to support the premise that the measured decreases in carbon monoxide concentrations are attributable to permanent and enforceable emission reductions, not unusually favorable meteorological conditions. The permanent and enforceable measures that have achieved continuing reductions in carbon monoxide concentrations, despite major increases in population, employment and vehicle travel in the region, are described in the Revised MAG 1999 Serious Area Carbon Monoxide Plan (MAG, 2001). For this purpose, long-term historical conditions for key meteorological parameters, including temperature, wind speed, wind direction, atmospheric stability, and mixing height, have been analyzed. The detailed results of this analysis are documented in Section IV-3-2 of the TSD (Appendix A, Exhibit 2).

Four different meteorological analyses were performed to demonstrate that the continuing trend in declining carbon monoxide concentrations in the Maricopa County area has not been due to favorable meteorological conditions. Figure 3-5 shows the results of one of these four analyses. This analysis was performed using meteorological data and eight-hour carbon monoxide concentrations for the winter seasons of 1994-2011. This graph shows clearly that maximum CO concentrations have declined, while daily wind speeds, temperatures, and mixing heights have not varied significantly over the same period.

The conclusions of the four meteorological analyses are summarized below:

- The maximum eight-hour CO concentrations have continued to decline, even though meteorological conditions during those years have not differed significantly from the 1994 episode meteorological conditions.
- The eight-hour CO concentrations have declined, while the daily variations in wind speeds, temperatures and mixing heights have not varied significantly over time.
- The one-hour CO concentrations have continued to decrease over time regardless of meteorological conditions.
- Daily maximum eight-hour CO concentrations below the CO standard were predominant during the period 1997 through 2011 under the same range of wind speeds and mixing heights.

FIGURE 3-5
NORMALIZED DIURNAL CYCLES OF WIND SPEED, TEMPERATURE, MIXING HEIGHT AND MAXIMUM EIGHT-HOUR CARBON MONOXIDE CONCENTRATIONS



Maintenance Demonstration Summary

Together, the three modeling and two weight of evidence analyses described above support a definitive conclusion that carbon monoxide concentrations will remain well below the one-hour and eight-hour standards through 2025. The following maximum eight-hour carbon monoxide concentrations were projected for 2025:

Emissions Inventory Comparison - 2.7 ppm (modeling domain); 2.2 ppm (maintenance area)

Scaled UAM/CAL3QHC Maximum Eight-Hour Concentrations - 4.0 ppm (modeling domain)

Intersection Hotspot Analysis - 1.7 ppm (near two high traffic/congested intersections)

Continued Monitored Attainment - 1.6 ppm (2nd-high at the West Phoenix monitor)

The maximum 2025 eight-hour carbon monoxide concentration projected by these four analyses was 4.0 ppm, which was based on scaled UAM/CAL3QHC modeling results from the 2003 CO Maintenance Plan. This maximum concentration in 2025 is less than half the eight-hour carbon monoxide standard of 9 ppm.

The Meteorological Analysis provides additional convincing evidence that the major reductions in carbon monoxide concentrations since 1994, despite increases in regional population, employment, and vehicle travel over this period, can be attributed to permanent and enforceable federal and local measures in the EPA-approved carbon monoxide plans for the region (MAG, 2001; MAG, 2003), rather than favorable meteorological conditions.

MONITORING NETWORK AND VERIFICATION OF CONTINUED ATTAINMENT

The ambient air quality monitoring network in Maricopa County is designed to assess the extent of air pollution, ensure compliance with national legislation, evaluate control options, and provide data for air quality modeling. In accordance with 40 CFR Part 58, the Maricopa County Air Quality Department (MCAQD) currently maintains twelve carbon monoxide monitoring sites in Maricopa County, while the Arizona Department of Environmental Quality (ADEQ) operates the Supersite in central Phoenix. Table 3-8 lists the carbon monoxide monitoring sites and their addresses.

MCAQD and ADEQ will continue to operate an appropriate air quality monitoring network to collect and provide air quality data for use in demonstrating ongoing attainment of the carbon monoxide standards. If the ambient levels of carbon monoxide concentrations rise and threaten to exceed the federal standards, the reasons for these occurrences will be investigated and appropriate actions will be taken. In compliance with 40 CFR Part 58 Subpart B, an annual air monitoring network review will be conducted to determine whether the network meets the monitoring objectives defined in Appendix D of 40 CFR Part 58, whether new sites are needed, and whether existing sites are no longer needed and can be terminated.

**TABLE 3-8
CARBON MONOXIDE MONITORING SITES IN MARICOPA COUNTY**

Site ID	Site Name	Abbr	Address	City
04-013-0016	West Indian School Rd*	WI	33 rd Ave & W Indian School Rd	Phoenix
04-013-0019	West Phoenix	WP	39 th Ave & Earll Dr	Phoenix
04-013-1003	Mesa	ME	Broadway Rd & Alma School Rd	Mesa
04-013-1004	North Phoenix	NP	7 th St & Dunlap Ave	Phoenix
04-013-2001	Glendale	GL	59 th Ave & W Olive	Glendale
04-013-3002	Central Phoenix	CP	16 th St & Roosevelt St.	Phoenix
04-013-3003	South Scottsdale	SS	Scottsdale Rd & Thomas Rd	Scottsdale
04-013-3010	Greenwood	GR	27 th Ave & Interstate 10	Phoenix
04-013-4003	South Phoenix	SP	Central Ave & Broadway Rd	Phoenix
04-013-4004	West Chandler	WC	Ellis St & Frye Rd	Chandler
04-013-4005	Tempe	TE	College Ave & Apache Blvd	Tempe
04-013-4010	Dysart	DY	Dysart Rd & Bell Rd	Surprise
04-013-4011	Buckeye	BE	Hwy 85 & MC 85	Buckeye
04-013-9997	Supersite	SUPR	4530 N 17 th Ave	Phoenix

* Closed in 2010.

CONTINGENCY PROVISIONS

Section 175A(d) of the Clean Air Act requires that the maintenance plan contain contingency provisions to ensure prompt actions to correct any violation of the carbon monoxide standard which occurs after redesignation to attainment. A contingency plan is not required to contain fully adopted contingency measures. However, the plan should contain clearly identified contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a specific time limit for action by the State. In addition, specific indicators should be identified which will be used to determine when the contingency measures need to be implemented (EPA, 1992). The 2013 Carbon Monoxide Maintenance Plan addresses each of these requirements below.

Two contingency measures in this plan were also contingency measures in the EPA-approved 2003 CO Maintenance Plan: Gross Polluter Option for I/M Program Waivers and Increased Waiver Repair Limit Options (MAG, 2003). A third contingency measure, Reinstatement of the VEI Program for Motorcycles, has been added to the 2013 CO Maintenance Plan.

Consistent with EPA guidance on early implementation of contingency measures, the two contingency measures that were approved in the 2003 CO Maintenance Plan have already been implemented in the CO maintenance area (EPA, 1993). No emission reduction credit for these two contingency measures was taken in this maintenance demonstration.

A description of the contingency measures in the 2003 CO Maintenance Plan is provided in Section VII-2-2 of the Technical Support Document in Appendix A, Exhibit 2 (MAG, 2003). The reasons for converting the Expansion of Area A Boundaries from a contingency measure in the 2003 CO Maintenance Plan to a maintenance measure in the 2013 Carbon Monoxide Maintenance Plan and the addition of a new contingency measure, Reinstatement of the VEI Program for Motorcycles, are discussed below.

In November 2012, EPA proposed to approve the 110(l) SIP revision submitted by the Arizona Department of Environmental Quality (ADEQ, 2009; ADEQ, 2011) that will eliminate the requirement for motorcycles to participate in the Arizona vehicle emissions inspection and maintenance (VEI) program (EPA, 2012a). EPA has indicated that the benefits of the contingency measure, Expansion of Area A Boundaries, in the 2003 CO Maintenance Plan may be used to offset the increase in emissions attributable to the exemption of motorcycles from the VEI program. Like other contingency measures in the 2003 CO Maintenance Plan, this measure was implemented early, in accordance with EPA guidance (EPA, 1993).

The motorcycle exemption is estimated to increase total carbon monoxide emissions in Area A by 0.264 metric tons per day or 0.027 percent, while the 2003 CO Maintenance Plan estimated that the expansion of Area A boundaries mandated by S.B. 1427 in 1998 reduced total CO emissions by 0.1 percent in 2000. Since the Expansion of Area A Boundaries will be used to offset the VEI exemption, it has been converted from a contingency measure in the 2003 Maintenance Plan to a committed maintenance measure in the 2013 Carbon Monoxide Maintenance Plan.

As indicated in the ADEQ SIP revision that will exempt motorcycles from VEI testing, CAA section 175A(d) requires that the State adopt as a contingency measure any control measure that was approved in the SIP prior to redesignation, but which the State subsequently repeals or relaxes (ADEQ, 2009; EPA, 2012a). In this instance, because the EPA-approved VEI program applied to motorcycles at the time the Maricopa County area was redesignated to attainment of the carbon monoxide standards in 2005, Reinstatement of the VEI Program for Motorcycles must also be adopted as a contingency measure in the 2013 Carbon Monoxide Maintenance Plan.

The ADEQ SIP revision proposes a contingency measure to reinstate VEI testing for motorcycles in Area A if a violation of the carbon monoxide standard occurs. If a violation of the eight-hour carbon monoxide standard occurs (i.e., the second-highest reading at the same monitor over two consecutive years is 9.5 ppm or higher), reinstatement of the motorcycle VEI program will be implemented according to the following schedule: ADEQ will request that the Arizona State Legislature reinstate emissions testing of motorcycles by October following the violation. In January 2013, ADEQ will request that the Legislature enact new legislation to reinstate emissions testing of motorcycles previously exempted by the revised SIP in the Phoenix vehicle emissions testing area, beginning January 1 of the following year (ADEQ, 2009).

In general, the success of an air quality program is measured by the concentrations recorded at the monitors. In order to ensure that violations of the carbon monoxide standards do not occur in the future, ambient air quality monitoring data will be examined to determine if additional contingency measures are needed. Two verified eight-hour carbon monoxide readings exceeding 9.0 ppm at one monitor during the same winter season (November - January) will trigger consideration of additional measures, which may include the strengthening of contingency measures that have already been implemented. When the trigger is activated, additional measures would be considered on the following schedule: (A) verification of the monitoring data to be completed three months after activation of the trigger; (B) applicable measures to be considered for adoption six months after the date established in (A); and (C) resultant committed measures to be implemented within twelve months after the adoption date in (B).

TRANSPORTATION CONFORMITY BUDGET

In accordance with the 1990 Clean Air Act Amendments (CAAA), transportation conformity requirements are intended to ensure that transportation activities do not result in air quality degradation. Section 176 of the Amendments requires that transportation plans, programs, and projects conform to applicable air quality plans before the transportation action is approved by a Metropolitan Planning Organization (MPO). The designated MPO for Maricopa County is the Maricopa Association of Governments.

Section 176(c) of the 1990 CAAA provides the framework for ensuring that Federal actions conform to air quality plans under section 110. Conformity to an implementation plan means

that proposed activities must not: (1) cause or contribute to any new violation of any standard in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

EPA transportation conformity regulations establish criteria involving comparison of projected transportation plan emissions with the motor vehicle emissions assumed in applicable air quality plans. These regulations define the term “motor vehicle emissions budget” as meaning “the portion of the total allowable emissions defined in a revision of the applicable implementation plan (or in an implementation plan revision which was endorsed by the Governor or his or her designee) for a certain date for the purpose of meeting reasonable further progress milestones or attainment demonstrations, for any criteria pollutant or its precursors, allocated by the applicable implementation plan to highway and transit vehicles.”

The MAG 2003 CO Maintenance Plan, submitted to EPA in May 2003, established two transportation conformity budgets for the carbon monoxide modeling domain: a 2006 CO emissions budget of 699.7 metric tons per day and a 2015 CO budget of 662.9 metric tons per day. EPA found the 2006 and 2015 carbon monoxide budgets to be adequate for conformity purposes, effective October 14, 2003. In addition, these budgets were approved by EPA as part of the MAG 2003 CO Maintenance Plan, effective April 8, 2005. Currently, the approved 2006 budget applies to conformity horizon years from 2006 through 2014 and the 2015 budget applies to horizon years after 2014.

Table 3-3 indicates that the onroad mobile source emissions for the CO maintenance area will be 359.4 metric tons per day in 2025. EPA has indicated a new version of MOVES may be released in 2013 that “will incorporate multiple sources of new emissions data” and “it is too early in the development process for us to estimate the overall direction and magnitude of the emissions changes” (EPA, 2012b). To ensure that increases in carbon monoxide emission rates in future versions of the MOVES model do not cause exceedances of the 2025 conformity budget, it is proposed that a “safety margin” be applied to the 2025 onroad mobile source emissions produced by MOVES2010b.

Table 3-3 indicates that the 2008 carbon monoxide emissions estimated by MOVES2010b for the maintenance area are 581.6 metric tons per day. The maximum eight-hour carbon monoxide concentration in 2008 was 3.1 ppm (at the West Phoenix monitor), which is only one-third of the standard. Figure IV-1 in the TSD (Appendix A, Exhibit 2) indicates that carbon monoxide concentrations have declined since 2008 at all monitors and are projected to remain far below the 2008 concentrations at every monitoring site. The hotspot analysis also revealed that the traffic at high volume and heavily congested intersections will increase eight-hour carbon monoxide concentrations by a maximum of 0.4 ppm in 2025. Therefore, an increase in the 2025 conformity budget to a level below the 2008 emissions will not result in an exceedance of the carbon monoxide standard.

It is proposed that the safety margin represent 90 percent of the difference between the 2008 and 2025 carbon monoxide emissions, which is 200.0 metric tons per day. When added to the 2025 carbon monoxide emissions of 359.4 metric tons per day, this establishes a new 2025 conformity budget of 559.4 metric tons per day for the CO maintenance area. It is important to note that the 2025 budget for the CO maintenance area is less than the 2006 and 2015 conformity budgets for the CO modeling domain, even though the maintenance area is more than twice the size of the modeling domain.

Once EPA finds the new 2025 budget to be adequate (or approves the 2025 budget as part of the MAG 2013 CO Maintenance Plan), the 2025 budget for the CO maintenance area will be applied in regional conformity analyses conducted by MAG for horizon years 2025 and beyond. The 2006 and 2015 conformity budgets approved by EPA as part of the MAG 2003 CO Maintenance Plan, effective April 8, 2005, will continue to be applied in conformity analyses for horizon years prior to 2025. The approved 2006 carbon monoxide budget of 699.7 metric tons per day for the CO modeling domain will be applied in regional conformity analyses for horizon years 2006 through 2014 and the approved 2015 carbon monoxide budget of 662.9 metric tons per day for the CO modeling domain will be applied for horizon years 2015 through 2024.

SUBSEQUENT MAINTENANCE PLAN REVISIONS

Section 175A(b) of the Clean Air Act requires that a maintenance plan be submitted to EPA eight years after the original redesignation request and maintenance plan has been approved (i.e., by April 8, 2013). The purpose of this second maintenance plan is to demonstrate maintenance of the federal carbon monoxide standards for an additional ten years (2016-2025) following the first ten-year period (2006-2015).

No additional revisions of the carbon monoxide maintenance plan are anticipated at this time. If EPA reduces the carbon monoxide standards, the Maricopa Association of Governments, as the designated Regional Air Quality Planning Agency for the Maricopa County area, will work with ADEQ, MCAQD, ADOT and EPA to revise the State Implementation Plan, if necessary to demonstrate attainment and maintenance of the new carbon monoxide standards.

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PUBLIC HEARING ON THE
MAG 2013 CARBON MONOXIDE MAINTENANCE PLAN
FOR THE MARICOPA COUNTY AREA

Phoenix, Arizona
February 19, 2013
5:30 p.m.

PREPARED FOR:

Maricopa Association of Governments
(ORIGINAL)

REPORTED BY:

Debora Mitchell
Arizona CCR No. 50768

MARICOPA ASSOCIATION OF GOVERNMENTS 2013

Carbon Monoxide Maintenance Plan Public Hearing, taken on February 19, 2013, commencing at 5:30 p.m. at Maricopa Association of Governments, 302 North 1st Avenue, Saguaro Room, Phoenix, Arizona, before Debora Mitchell, an Arizona Certified Reporter, in and for the County of Maricopa, State of Arizona.

APPEARANCES:

Ms. Lindy Bauer, Maricopa Association of Governments

Ms. Diane Arnst, Arizona Department of Environmental Quality

1 (Commencement of Public Hearing at
2 5:30 p.m.)

3 * * * * *

4 MS. BAUER: Good evening. My name is
5 Lindy Bauer with the Maricopa Association of
6 Governments, and I would like to welcome those if you
7 that came to our public hearing on the MAG 2013 Carbon
8 Monoxide Maintenance Plan for the Maricopa County Area.
9 This public hearing is being jointly held by the
10 Arizona Department of Environmental Quality and
11 Maricopa Association of Governments to receive public
12 comments on the draft MAG 2013 Carbon Monoxide
13 Maintenance Plan for the Maricopa County Area.

14 Those driving to the meeting and parked in the
15 garage can have their tickets validated by MAG staff.
16 The public hearing will begin with some introductory
17 remarks by the Arizona Department of Environmental
18 Quality and then an overview presentation by the MAG
19 staff.

20 Following the presentation, hearing
21 participants are invited to make comments for the
22 public record. A court reporter is present to provide
23 an official record of the hearing. Written comments
24 are also welcomed at the hearing.

25 For those participants who wish to speak,

1 please fill out a form on the table and place it in the
2 box. If you need to speak early to meet a bus
3 schedule, please tell the MAG staff, and we will
4 accommodate your request.

5 As you come up to the podium, please state some
6 information for the formal record, your name, and who
7 you represent. I'd like to note that we have a timer
8 to assist the public in their presentations. We have a
9 three-minute time limit. When two minutes have
10 elapsed, the yellow light will come on notifying the
11 speaker that they have one minute to sum up. At the
12 end of the three-minute time period, the red light will
13 come on.

14 And now we will have some introductory remarks
15 from the Arizona Department of Environmental Quality.

16 MS. ARNST: My name is Diane Arnst, and I am
17 the manager of the legal support section at the Arizona
18 Department of Environmental Quality. I am here to
19 express support and confidence that this maintenance
20 plan will continue to prevent any violations of the
21 common monoxide standard, which has been met for more
22 than 16 years.

23 MS. BAUER: Thank you very much, Diane.

24 And now we will move on to the presentation on
25 the MAG 2013 Carbon Monoxide Maintenance Plan.

1 Thank you very much. It is a real pleasure to
2 present this carbon monoxide maintenance plan. As you
3 will soon see, we have been clean from this pollutant
4 for several years. Carbon monoxide is a colorless,
5 odorless, tasteless gas. Carbon monoxide used to be a
6 problem here during the winter months; however, the
7 region has met the standard and has been clean for
8 several years.

9 To give you an overview, in April of 2005, the
10 Environmental Protection Agency approved the revised
11 MAG 1999 Serious Area Carbon Monoxide Plan. This plan
12 demonstrated attainment of the standard in the year
13 2000. At the same time, the EPA also approved the MAG
14 2003 Carbon Monoxide Redesignation Request and
15 Maintenance Plan. This plan demonstrated maintenance
16 of the standard through 2015.

17 At the same time, the EPA also redesignated the
18 Maricopa County Nonattainment Area to attainment
19 status. We then became a maintenance area. There have
20 been no violations of the one-hour carbon monoxide
21 standard since 1984 and no violations of the eight-hour
22 carbon monoxide standard since 1996.

23 The carbon monoxide maintenance area
24 encompasses 1,882 square miles. There are 13 carbon
25 monoxide monitors in the region; 12 of these are inside

1 of the maintenance area. Now, MAG closely tracks the
2 air quality monitor data. Over the years there has
3 been tremendous progress in reducing this pollutant.
4 Several measures have been implemented by the local
5 governments, the state, and the federal government.

6 As you can see, in 1984 there were 86 days of
7 exceedances of the carbon monoxide standard. And look
8 at all of the zeros. We have been clean for several
9 years. Carbon monoxide concentrations have also
10 decreased significantly. In 2012, the second-highest
11 eight-hour concentration is 2.5 parts per million
12 against a standard of 9. This is less than a third of
13 the carbon monoxide standard. So this region at the
14 monitors is way below the standard.

15 The MAG 2013 Carbon Monoxide Maintenance Plan
16 is designed to meet the requirements of Section 175(b)
17 of the Clean Air Act. The Clean Air Act requires an
18 additional plan demonstrating maintenance of the
19 standard for ten years beyond the initial ten-year
20 period. This maintenance plan is due eight years from
21 the point of when EPA redesignated this region to
22 attainment. This was April 8, 2013, which is coming up
23 shortly. We must demonstrate maintenance of the
24 standard ten years after 2015, or by 2025.

25 The 2008 carbon monoxide emissions inventory

1 serves as the base for this plan. As you can see,
2 64.5 percent of the carbon monoxide emissions are
3 coming from onroad sources, cars and trucks for the
4 most part. And then you can see, 31.2 percent is also
5 coming from nonroad equipment and vehicles. Only a
6 very small part is due to point sources and area
7 sources.

8 Our general approach for this plan has been to
9 rely on the measures from our prior Serious Area Carbon
10 Monoxide Plan and Maintenance Plan that had been
11 approved by the EPA. There are ten measures in this
12 maintenance plan. Most are related to the vehicle
13 emissions inspection program because this pollutant is
14 very much tailpipe related. Then in addition there are
15 the clean burning fireplace ordinances. And I want to
16 point out that expansion of the Area A boundaries, this
17 was previously a contingency measure. However, for
18 this plan, it has been moved over to the maintenance
19 side.

20 The carbon monoxide maintenance plan also
21 includes contingency measures. There are three of
22 them, and these again are tied to the vehicle emissions
23 testing program: the gross polluter option, increased
24 waiver repair limit options, and reinstatement of the
25 vehicle emissions program for motorcycles.

1 I would like to point out that in November of
2 2012, the EPA proposed to approve a plan submitted by
3 the Arizona Department of Environmental Quality that
4 will eliminate the requirement for motorcycles to be
5 tested in the vehicle emissions testing program. DEQ
6 made a commitment to reinstate the program if there is
7 a violation of the carbon monoxide standard. So these
8 are the three contingency measures that have benefits
9 above and beyond what is already in the plan, above and
10 beyond the other ten measures.

11 Now, MAG performed a series of analyses on the
12 measures for this plan. Again, the carbon monoxide
13 standard, the second-highest monitored value each year
14 should not exceed 35 parts per million for the one-hour
15 standard, 9 parts per million for the eight-hour
16 average.

17 Three different analyses were performed: a
18 comparison of the emission inventories, scaling maximum
19 concentrations, and intersection analysis. In
20 addition, there were two weight of the evidence
21 evaluations conducted where we examined actual air
22 quality trends and meteorological data. The results:
23 the maximum 2025 eight-hour carbon monoxide
24 concentration is 4 parts per million. This is less
25 than half the standard.

1 Now, the air quality analysis produces a pie
2 chart in 2025 assuming that we will be at 4 parts per
3 million. And as you can see in this pie chart, the
4 total tonnage has been reduced greatly from the
5 901 tons down to 639.6 metric tons per day.

6 This pie chart also produces a motor vehicles
7 emissions budget for transportation conforming purposes
8 of 559.4 metric tons per day. We use the motor vehicle
9 emission budget to test our transportation plans to
10 ensure that transportation plans, programs, and
11 projects will not contribute to air-quality violations.

12 Now, at this point, I would like to point out
13 that we have made an adjustment to the point source
14 category due to converting English tons to metric tons.
15 This amounts to 1.8 tons added to the point source
16 category. This is insignificant since the 1.8 tons
17 equates to .28 percent of the 639.6 tons. I would
18 also like to mention that from this point forward, the
19 plan will reflect this change to accommodate the
20 conversion.

21 And now in conclusion, I would like to go over
22 the schedule for this plan. On January 18, 2013, the
23 document became available for public review. Tonight
24 we are having the public hearing. On February 28 the
25 MAG Air Quality Technical Advisory Committee is

1 anticipated to make a recommendation on the plan
2 following the consideration of public comments. The
3 MAG Management Committee will meet on March 13, 2013,
4 and will be making a recommendation to the MAG Regional
5 Council.

6 The Mag Regional Council, the decision-making
7 body of MAG, will meet on March 27, 2013. It is
8 anticipated that MAG will then submit the plan to the
9 Arizona Department of Environmental Quality and the
10 Environmental Protection Agency on March 29. And this
11 is before the plan is actually due on April 8, 2013.

12 This concludes my presentation this evening.
13 And now we would welcome any comments that anyone has.
14 We will open it up for public comment. Thank you very
15 much.

16 (Call to the public.)

17 MS. BAUER: At this time there appears not to
18 be any public comments or anyone wishing to address us
19 on the MAG 2013 Carbon Monoxide Maintenance Plan. The
20 Maricopa Association of Governments appreciates your
21 interest in regional air-quality issues, and I would
22 like to thank you for coming this evening. I will now
23 close the public hearing. Thank you.

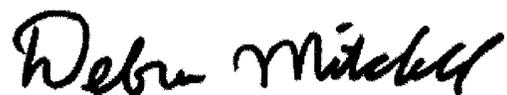
24 (Conclusion of public hearing at
25 5:43 p.m.)

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

BE IT KNOWN that the foregoing transcript was taken before me, Debora Mitchell, a Certified Court Reporter, in and for the County of Maricopa, State of Arizona; that the foregoing proceedings were taken down by me using the Voice Writing method and translated into text via speech recognition under my direction; and that the foregoing typewritten pages are a full, true, and accurate transcript of all proceedings, all done to the best of my ability.

I FURTHER CERTIFY that I am in no way related to any of the parties hereto, nor am I in any way interested in the outcome hereof.

DATED at Phoenix, Arizona, this 20th day of February, 2013.



Debora Mitchell - Digital Signature
AZ Certified Reporter No. 50768

EXCEPTIONAL EVENTS ISSUES

- By February 14, 2013, the Environmental Protection Agency (EPA) was required to approve the MAG 2012 Five Percent Plan for PM-10 in order to avoid the imposition of a federal implementation plan. The documentation for the remaining 26 exceptional event days that occurred in 2011 and 2012 had to be submitted and concurred with by EPA in time for EPA to approve the Five Percent Plan. The required documentation is extensive and represents a tremendous workload. On September 6, 2012, EPA approved the exceptional event package for five exceptional event days in July 2011. The package was more than 200 pages in length and took six months to assemble.
- The Arizona Department of Environmental Quality (ADEQ) has completed all of the required documentation with consultant assistance at an estimated cost of \$500,000, and technical assistance from Maricopa County and the Maricopa Association of Governments (MAG). EPA Region IX staff have also assisted in further streamlining the documentation. Ten packages of exceptional events became available for public review on December 3, 2012 and were transmitted to EPA on January 28, 2013. The remaining seven packages became available for public review on January 14, 2013 and were transmitted to EPA on February 13, 2013. Comments were received from the Arizona Center for Law in the Public Interest and ADEQ has responded to the comments. EPA is currently in the process of reviewing the exceptional events documentation.
- While EPA has made some improvements to their most recent draft exceptional events guidance, the documentation required is extensive. It is evident that additional streamlining still needs to be done. Background information is provided below.

Background Information

- On July 6, 2012, the Environmental Protection Agency published a notice of availability and public comment period for the Draft Guidance to Implement Requirements for the Treatment of Air Quality Monitoring Data Influenced by Exceptional Events and associated attachments. The documents clarified key provisions and responded to questions and issues that have arisen since EPA promulgated the Exceptional Events Rule, and updated the prior May 2011 guidance.
- On August 31, 2012, the Maricopa Association of Governments submitted extensive comments on the Draft Guidance. While some improvements have been made, the revised guidance includes additional requirements and the documentation remains resource intensive. An overriding concern has been to develop a more streamlined and predictable approval process for exceptional events that relies on the work performed by state and local air quality agencies.
- The resource-intensive nature of the Draft Guidance has created an untenable situation for state and local air agencies that must submit exceptional event documentation either to avoid designation as nonattainment or avoid continual nonattainment designation. Especially for areas that experience frequent, recurring exceptional events, the current process is unsustainable.

- There is a need for EPA to streamline the documentation required to demonstrate exceptional events by states and the EPA process and timeline for approving exceptional events. Streamlining is critical to ensure that areas do not face continual, reoccurring nonattainment due to exceptional events beyond their control.
- The attention of the Draft Guidance needs to shift back towards ways in which the exceptional events process can efficiently grant relief to state and local air agencies that require exclusion of exceptional event data in order to attain or maintain the National Ambient Air Quality Standards.
- In the comments, MAG developed an example form which could be completed by state and local air agencies for high wind dust exceptional events to significantly streamline the exceptional event demonstrations. This form creates a straightforward description of the exceptional event, an explanation of how each element of the exceptional event rule is met, and provides for the attachment of additional information. The form allows the air agency to readily provide to EPA the level of information needed to support the demonstration on a case-by-case basis. EPA could then quickly evaluate the form, and the additional information attached, and either concur or request more information when warranted. When an air agency and EPA agree that a high wind dust exceptional event has occurred, the form greatly reduces the resources expended by both parties.
- Comments on the Draft Exceptional Events Guidance were also submitted by the Western States Air Resources Council (WESTAR), Arizona Department of Environmental Quality, Maricopa County, Associated General Contractors, Congressman Flake, and others. The workload issue and the need for additional streamlining were included in several of these comments.
- On October 19, 2012, EPA sent a letter to MAG regarding the MAG comments on the Draft EPA Exceptional Events Guidance Documents. In the letter, EPA indicated that after consideration of all the comments submitted, EPA will determine whether to issue final guidance and/or make a decision on whether to proceed with amendments to the EPA Exceptional Events Rule.
- MAG has also been working with the Washington special legal counsel and Congressional delegation staff in the event that the comments are unsuccessful in streamlining the exceptional events process and the required documentation. If legislation becomes necessary, MAG has been exploring possible legal remedies that would allow states and tribes to make exceptional events determinations. In addition, MAG had provided a redline of Congressman Flake's legislation, The Commonsense Legislative Exceptional Events Reform Act of 2012 (CLEER Act) to suggest some improvements to streamline the excessive documentation. The suggestions also included an option for EPA to allow for states to make determinations on exceptional events.
- During the December 6, 2012 Arizona Highway Users luncheon, there was some discussion regarding the exceptional events issues and the CLEER Act legislation. Interest was expressed by Representative Tobin, Senator Biggs, and the Arizona Farm Bureau in the MAG comments on the Draft EPA Exceptional Events Guidance and in the redline of the CLEER Act legislation. These items were then transmitted to them.

MAG, February 21, 2013

.....
(Original Signature of Member)

112TH CONGRESS

~~2550N~~

H. R.

To amend the Clean Air Act with respect to exceptional event demonstrations,
and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. FLAKE introduced the following bill; which was referred to the Committee
on _____

A BILL

To amend the Clean Air Act with respect to exceptional
event demonstrations, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Commonsense Legisla-
5 tive Exceptional Events Reforms Act of 2012”.

6 **SEC. 2. AMENDMENTS TO THE EXCEPTIONAL EVENT PROVI-**

7 **SION OF THE CLEAN AIR ACT.**

8 (a) EXCEPTIONAL EVENT DEMONSTRATION.—Sec-
9 tion 319(b)(3)(B)(iv) of the Clean Air Act (42 U.S.C.

1 7619(b)(3)(B)(iv)) is amended by striking “to petition the
2 Administrator to” and inserting “to submit a petition (in
3 this section referred to as an ‘exceptional event dem-
4 onstration’) to the Administrator to”.

5 (b) CRITERIA.—Section 319(b)(3) of the Clean Air
6 Act (42 U.S.C. 7619(b)(3)) is amended by adding at the
7 end the following:

8“(C) CRITERIA FOR DETERMINATION OF

9 EXCEPTIONAL EVENT DEMONSTRATION.—The

10 criteria for evidence, analyses, and documenta-
11 tion applicable to approval or disapproval of an
12 exceptional event demonstration under the regu-
13 lations under this section shall be stated with
14 specificity in order to assist States in obtaining prompt review of

exceptional events and to minimize the discretion of

15 the Administrator in approving or disapproving

16 such demonstration. The Administrator shall

17 develop such criteria in conjunction with input

18 from the States. Such criteria shall streamline the criteria and documentation
19 required for exceptional events, reflect the

20 varying level of technical expertise and re-

21 sources available in State and local agencies,

22 ~~and~~ the varying availability of meteorological

and other monitoring data in rural areas, and the varying

meteorological and climatic conditions in different states,
including states with arid areas. Such criteria~~and~~

~~23~~ _____ may vary with
respect to different regions. In

24 developing such criteria, the Administrator shall

25 also consider use of an expedited or streamlined

~~f:\VHLC\041812\041812.308.xml (516275|16)~~
~~April 18, 2012 (5:01 p.m.)~~

1 approval process and conditions under which
2 exceptional event demonstrations may be suit-
3 able for such a process.”.

“(D) Additional Authority.—Notwithstanding any other
provision of this Act, the Administrator may deem a State
petition to be approved based solely on the State’s
determination that an exceptional event has occurred and that
the requirements of this section are satisfied, including all
requirements contained in paragraphs (A) and (B).”

4 (c) TIMING OF APPROVAL OR DISAPPROVAL OF EX-
5 CEPTIONAL EVENT DEMONSTRATION.—Section 319(b)(3)
6 of the Clean Air Act (42 U.S.C. 7619(b)(3)) is further
7 amended by adding at the end the following:

8 “(D) TIMING OF DETERMINATION OF EX-
9 CEPTIONAL EVENT DEMONSTRATION.—

10 “(i) DEADLINE FOR DETERMINA-
11 TION.—Not later than 90 days after sub-
12 mission of an exceptional event demonstra-
13 tion, the Administrator shall approve, dis-
14 approve, or request additional information
15 from a State regarding such exceptional
16 event demonstration. If the Administrator
17 does not take any action with respect to an
18 exceptional event demonstration within
19 such 90-day period, such demonstration
20 shall be considered approved.

21 “(ii) DEADLINE IF ADDITIONAL IN-
22 FORMATION REQUESTED.—If the Adminis-

23 trator requests additional information from
24 a State regarding an exceptional event
25 demonstration under clause (i), not later

1 than 90 days after the submission of such
2 additional information, the Administrator
3 shall approve or disapprove such dem-
4 onstration. If the Administrator does not
5 approve or disapprove such a demonstra-
6 tion for which additional information is
7 submitted within such 90-day period, such
8 demonstration shall be considered ap-
9 proved.”.

10 (d) BURDEN OF PROOF.—Section 319(b)(3) of the
11 Clean Air Act (42 U.S.C. 7619(b)(3)) is further amended
12 by adding at the end the following:

13 “(E) BURDEN OF PROOF.—The regula-
14 tions promulgated under this section shall pro-
15 vide that a determination by the Administrator
16 with respect to approval or disapproval of an
17 exceptional event demonstration be based on a
18 preponderance of the evidence. In making any
19 such determination, the Administrator shall ac-
20 cord substantial deference to the findings of the
21 State exceptional event demonstration, ~~and may~~
22 ~~develop and use analyses and consider evidence~~
23 ~~not provided by such exceptional event dem-~~
24 ~~onstration.”.~~

1 (e) APPEALS.—Section 319(b)(3) of the Clean Air
2 Act (42 U.S.C. 7619(b)(3)) is further amended by adding
3 at the end the following:

4 “(F) APPEALS.—Approval or disapproval
5 by the Administrator of an exceptional event
6 demonstration shall be considered final action
7 subject to judicial review under section
8 307(b).”.

(f) OTHER AMENDMENTS.—Section 319(b) of the
Clean Air Act (42 U.S.C. 7619(b)(3)) is further amended by:

(1) striking “location or a natural event” in section
319(b)(1)(A)(iii) and inserting in lieu thereof “location, a
natural event or a high wind event; and”

(2) inserting after “subsection,” in section
319(b)(1)(B), “except a high wind event,”

(3) by adding at the end the following:

“(C) Definition.—

“In this subsection –

“(i) the term ‘natural event’
means an event in which

human activity plays little or
no direct causal role;”

“(2) the term ‘high wind event’
means an event where
particulate matter is raised or
transported by high winds.”

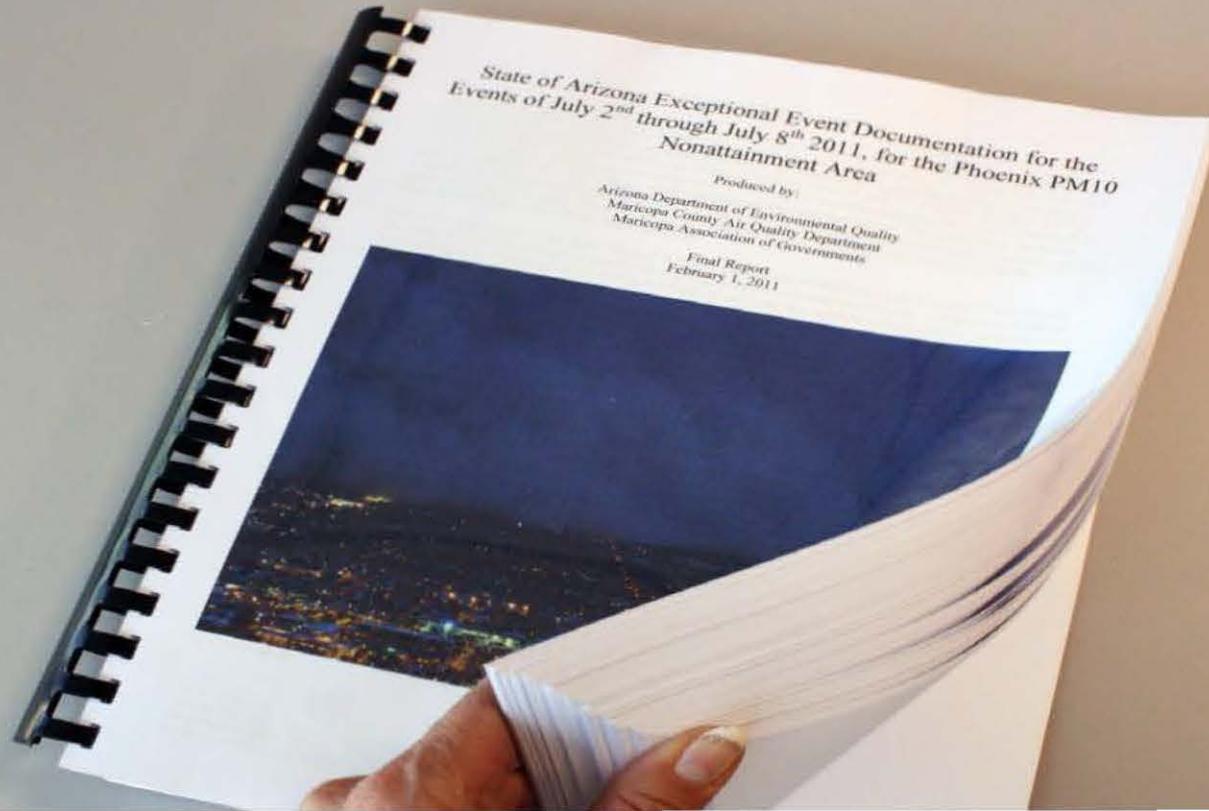
9 (g) REVISION OF REGULATIONS.—Not later than 180
10 days after the date of enactment of this Act, the Adminis-

11 trator of the Environmental Protection Agency shall revise
12 the regulations under section 319(b) of the Clean Air Act
13 (42 U.S.C. 7619(b)) to carry out the amendments made
14 by this Act.

Haboobs Happen



Six Months & More Than 200 Pages to Prove to EPA the Haboob was Not Man Made



ACLP**ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST**dedicated to ensuring government accountability
and protecting the legal rights of Arizonans

February 15, 2013

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Bob Perciasepe, Acting Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: Notice of citizen suit under §304 of Clean Air Act --Phoenix PM₁₀ Serious Nonattainment Area

Dear Mr. Perciasepe:

Pursuant to 42 U.S.C. §7604(a)(2), we hereby provide notice of our intent to file a citizen suit to compel performance of certain nondiscretionary duties imposed upon you under the Clean Air Act (the CAA).

In 1996, the Phoenix area was classified as a serious PM-10 nonattainment area under the CAA and was required to develop a nonattainment plan that provided for expeditious attainment of both the annual and 24 hours PM-10 standards and met the other applicable CAA plan requirements for serious areas. See 61 FR 21372 (May 10, 1996). Since 1996, Arizona has made several SIP submittals and adopted various control measures but continues to violate the 24 hour standard.

A serious area PM₁₀ plan was first submitted on July 8, 1999. EPA found the plan "complete" on August 4, 1999 but in November 1999, EPA notified the state that additional work needed to be done in order for EPA to approve it. Consequently, on February 23, 2000, the state submitted a revised Serious Area PM₁₀ plan, which was found "complete" by EPA on February 25, 2000.

On April 13, 2000, EPA proposed to approve the Serious Area PM₁₀ plan for the annual standard, but took no action on the 24 hour standard. Consequently, in May 2001, this office filed a citizen suit in U.S. District Court on behalf of Phoenix residents to compel EPA to take action. *Bahr v. Whitman*, CIV 01-0835 PHX ROS (D. Ariz.) The parties entered into a Consent Decree requiring EPA to take action on the 24 hour standard on or before September 14, 2001, and to approve or disapprove the entire plan by January 14, 2002. *Id.*, consent decree entered October 2, 2001.

On July 25, 2002, EPA published its final approval of the Serious Area Plan. The approval also granted the Phoenix area the maximum five year extension of the attainment deadline, giving the area until December 31, 2006 to come into compliance with the NAAQS. On behalf of residents of the Phoenix area, this office filed a Petition for Review of the Serious Area Plan with the Ninth Circuit Court of Appeals. *Vigil v. Leavitt*, 381 F. 3d 826 (9th Cir. 2004). In ruling on that Petition, the Ninth Circuit held that EPA's approval of the Serious Area Plan was arbitrary and capricious and remanded the action to EPA for further consideration of whether Arizona's decision to reject CARB diesel as an emissions control measure satisfied BACM and MSM. The court also remanded the question of Arizona's eligibility for the extension of the attainment deadline insofar as that question depended on EPA's determination regarding MSM.

In June 2005, EPA proposed to reapprove the BACM and MSM demonstrations and finalized the re-approval in July 2006. This office again petitioned for review, however, that action was resolved through a voluntary remand when it became apparent that the state would not be able to meet the extended December 31, 2006 deadline for attainment. In March 2007 EPA filed a proposed finding of nonattainment and the final notice of nonattainment was published on June 6, 2007. (72 FR 31183)

Under section 189(d) of the CAA, serious PM-10 nonattainment areas that fail to attain are required to submit within 12 months of the applicable attainment date, "plan revisions which provide for attainment of the PM-10 air quality standard and, from the date of such submission until attainment, for an annual reduction in PM-10 or PM-10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for such area." 42 U.S.C. §7513a(d).

Arizona submitted its 5% plan to EPA by the December 2007 deadline and EPA had six months, or until June 30, 2008 to find the plan "complete." 42 U.S.C. §7410(k)(1)(b). Because EPA did not take action by that date, the plan was deemed "complete" by operation of law. *Id.* Once a plan is deemed complete, EPA then has 12 months to approve or disapprove the plan. *Id.* at (k)(2). Thus, in the case of the Phoenix area's 5% plan, EPA had until June 30, 2009 to approve or disapprove the submitted plan. When EPA had taken no action on the 5% plan by that date, this office filed an action in federal district court requesting enforcement of that deadline. *Bahr v. Jackson*, CV09-2511-PHX-MHM (D. Ariz.). Pursuant to the Consent Order filed in that case, on September 3, 2010, the EPA proposed action on the 5% plan. The EPA proposed to disapprove substantial parts of the plan finding that it was deficient. In response to EPA's proposed action, on January 25, 2011, the state withdrew its 5% plan. A few days later, on January 31, 2011, the EPA found that Arizona failed to make a SIP submittal required under the CAA for the Maricopa County PM-10 nonattainment area by the required deadline. 76 F. R. 8300-8303. This triggered the 18-month clock for mandatory sanctions and a two year clock for a Federal Implementation Plan ("FIP").

On May 25, 2012, the state submitted a replacement 5% plan to the EPA, which the EPA found complete on July 20, 2012. The EPA was required to approve the replacement plan by February 14, 2013 or promulgate a FIP and impose highway funding sanctions; however, the EPA has failed to do so. We contend that in failing to take final action with regard to the replacement plan or promulgate a FIP and impose highway funding sanctions, the EPA has failed to timely perform non-discretionary duties under the CAA. If EPA does not correct the above-described failure to perform

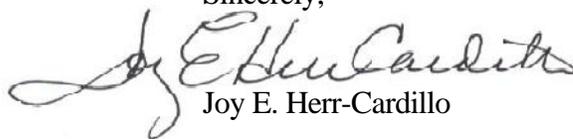
nondiscretionary duties within 60 days, be advised that we intend to initiate legal action under §304(a)(2) of the CAA to compel compliance. This notice is submitted on behalf of:

Sandra L. Bahr
2046 N. 10th St.
Phoenix, Arizona 85006

David Matusow
43311 N. 18th Street
Phoenix, AZ 85087

I am acting as counsel for the above-named parties and ask that all communications regarding this matter be directed to me at the address shown in the letterhead.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joy E. Herr-Cardillo".

Joy E. Herr-Cardillo

Cc: Jared Blumenfeld, Regional Administrator, EPA Region 9
Colleen McKaughan, Associate Director, Air Division, EPA Region 9
Henry Darwin, Director, Arizona Department of Environmental Quality