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**2009 IMPLEMENTATION STATUS OF COMMITTED MEASURES  
IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE  
MARICOPA COUNTY NONATTAINMENT AREA**

**MAY 2011**



## **2009 IMPLEMENTATION STATUS OF COMMITTED MEASURES IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA**

The MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area was submitted to the Environmental Protection Agency (EPA) in December 2007. In order to reduce PM-10, a broad range of commitments to implement measures were received from the State, Maricopa County, and the twenty-three local governments in the PM-10 nonattainment area. The plan included fifty-three committed control measures which began implementation in 2008. The Maricopa Association of Governments (MAG) is tracking the implementation status of the measures in the plan.

In January 2010, MAG issued a report summarizing the implementation status of the committed measures for calendar year 2008. The following 2009 implementation status report also incorporates the results from 2008 in order to more accurately reflect the level of implementation of the committed measures in the region. Implementation of the committed measures in the Five Percent Plan were being phased in over a three-year period (2008, 2009, 2010).

Tracking forms were prepared to assist the implementing entities in reporting the progress made to implement the measures for calendar year 2009. The 2009 tracking forms were sent to MAG member agencies on March 11, 2010. All completed 2009 tracking forms were received by July 23, 2010. MAG has summarized the combined 2008 and 2009 status of the implementation of the committed measures. In general, the combined implementation results for 2008 and 2009 meet or exceed the commitments made to implement a majority of the measures in the MAG Five Percent Plan for PM-10. Table 1 summarizes the measures that exceeded their commitments. Table 2 lists the implementation status of all of the committed measures in the Five Percent Plan for PM-10.

Figure 1 illustrates the PM-10 emission reductions in 2010 for the committed control measures that were quantified for numeric credit to meet the five percent per year target and demonstrate attainment. Figure 2 provides the PM-10 emission reductions in 2010 for the committed contingency measures that were quantified for numeric credit. In some cases, the emission reductions represent the impact of multiple, reinforcing measures.

### **BACKGROUND INFORMATION**

In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 was submitted to the Environmental Protection Agency by December 31, 2007. The plan was required to reduce PM-10 emissions by five percent per year until the standard is met. In order to attain the standard by December 31, 2010, the region needed three years of clean data at the monitors (2008, 2009, 2010). It is important to attain the PM-10 standard as quickly as possible or additional years of five percent reductions may need to be added to the plan. The Executive Summary for the MAG 2007 Five Percent Plan for PM-10 is attached.

On May 23, 2007, the MAG Regional Council approved additional items for the Suggested List of Measures to Reduce PM-10. One of the items was that each year, MAG would issue a report on the status of the implementation of the committed measures for this region by the cities, towns, Maricopa County and the State. The report would be made available to the Governor's Office, Legislature, Arizona Department of Environmental Quality and the Environmental Protection Agency. This report provides the combined implementation status of committed measures for calendar years 2008 and 2009.

The forms for tracking the implementation of committed measures were developed with input from the implementing entities. On April 1, 2010, MAG conducted a workshop to discuss the tracking of the measures for calendar year 2009.

Monitored exceedances of the 24-hour PM-10 standard have declined since 2006, as shown in Figure 3. There can be no more than three daily exceedances at any PM-10 monitor over a three year period in order for the standard to be met. The measures described in this tracking report will be important in reducing PM-10 emissions to enable the region to meet the standard. MAG will continue to monitor the implementation status of the measures, as well as PM-10 concentrations.

**TABLE 1  
MEASURES THAT EXCEEDED 2008 AND 2009 COMMITMENTS  
IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10**

COMMITTED MEASURE	COMMITMENT	ACTUAL	EXCEEDED COMMITMENT
<b>26. Pave or stabilize existing public dirt roads and alleys.</b> <ul style="list-style-type: none"> <li>• Pave public dirt roads.</li> <li>• Stabilize public dirt roads.</li> <li>• Pave dirt alleys.</li> <li>• Stabilize dirt alleys.</li> </ul>	<p style="text-align: center;">27.20 miles</p> <p style="text-align: center;">29.49 miles</p> <p style="text-align: center;">63.44 miles</p> <p style="text-align: center;">116.35 miles</p>	<p style="text-align: center;">32.38 miles</p> <p style="text-align: center;">40.76 miles</p> <p style="text-align: center;">71.77 miles</p> <p style="text-align: center;">273.97 miles</p>	<p style="text-align: center;">5.18 miles</p> <p style="text-align: center;">11.27 miles</p> <p style="text-align: center;">8.33 miles</p> <p style="text-align: center;">157.62 miles</p>
<b>27. Limit speeds to 15 miles per hour on high traffic dirt roads.</b> <ul style="list-style-type: none"> <li>• Post 15 mph speed limit signs.</li> </ul>	<p style="text-align: center;">28.06 miles</p>	<p style="text-align: center;">56.91 miles</p>	<p style="text-align: center;">28.85 miles</p>
<b>28. Pave or stabilize unpaved shoulders.</b> <ul style="list-style-type: none"> <li>• Pave unpaved shoulders.</li> <li>• Stabilize unpaved shoulders.</li> </ul>	<p style="text-align: center;">71.00 curb miles</p> <p style="text-align: center;">185.75 curb miles</p>	<p style="text-align: center;">271.31 curb miles</p> <p style="text-align: center;">403.98 curb miles</p>	<p style="text-align: center;">200.31 curb miles</p> <p style="text-align: center;">218.23 curb miles</p>
<b>53. Repave or overlay paved roads with rubberized asphalt.</b> <ul style="list-style-type: none"> <li>• Repave highway with rubberized asphalt.</li> </ul>	<p style="text-align: center;">5.21 miles</p>	<p style="text-align: center;">12.50 miles</p>	<p style="text-align: center;">7.29 miles</p>
<b>45. Prohibit use of leaf blowers on unstabilized surfaces.</b>	<p style="text-align: center;">Maricopa County</p>	<p style="text-align: center;">Maricopa County</p> <p style="text-align: center;">1 local government</p>	<p style="text-align: center;">1 local government</p>

**TABLE 2**  
**2008 AND 2009 IMPLEMENTATION STATUS OF COMMITTED MEASURES**  
**IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10**

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<b>Fugitive Dust Control Rules</b>		
<p>1. <b>Public education and outreach with assistance from local governments.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>590 Articles (internal and public media, newsletters, etc.) were published.</p> <p>291 Media / Events (specific air events, booths on air quality at other events, media, etc.) were held.</p> <p>Over 137,000 visits to the Maricopa County Air Quality Department (MCAQD) website; over 24,000 visits to the Air Quality news page; 30,045 total page views on <a href="http://www.CleanAirMakeMore.com">www.CleanAirMakeMore.com</a>.</p> <p>In addition to publishing articles and conducting events, Maricopa County and 15 local governments performed other types of public education and outreach activities.</p>	<p>County, State, local governments</p>
<p>2. <b>Extensive Dust Control Training Program.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Dust Control training program required by Senate Bill (SB) 1552. (A.R.S. § 49-474.05 A. &amp; B.)</p> <p>In March 2008, Maricopa County adopted Rule 310, Rule 280, and Rule 316 revisions in regard to dust control training.</p> <p>In 2008, Maricopa County hired 2 dust control compliance and 2 administrative support personnel to coordinate and conduct the training program. In 2009, two inspectors and two administrative staff worked part time to coordinate and conduct the Rule 310 and Rule 316 Dust Control Training programs.</p> <p>13,231 individuals completed County-certified dust control training classes. This includes training conducted by certified trainers in local government. One local government has provided all applicable workers with dust control training.</p> <p>In one jurisdiction, 63 staff received training and certificates for the Maricopa County Basic Dust Control Rule 310 and 1 staff member received the Comprehensive Dust Control Rule 310 training and certificate.</p> <p>In one federal agency, 2 staff members completed training to become certified dust control coordinators.</p>	<p>County</p>

<b>COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10</b>	<b>2008 and 2009 IMPLEMENTATION STATUS</b>	<b>IMPLEMENTING ENTITY</b>
<p><b>3. Dust Managers required at construction sites of 50 acres and greater.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Dust managers required by SB 1552. (A.R.S. § 49-474.05 A. &amp; E.)</p> <p>In March 2008, Maricopa County adopted Rule 310 and Rule 316 revisions in regard to dust managers.</p>	<p>County</p>
<p><b>4. Dedicated enforcement coordinator for unpaved roads, unpaved parking, and vacant lots.</b></p>	<p>Maricopa County assigned a supervisor to oversee the vacant lot program.</p>	<p>County</p>
<p><b>5. Establish a certification program for Dust Free Developments to serve as an industry standard.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>SB 1552 required ADEQ to establish a certification program. (A.R.S. § 49-457.02 A.)</p> <p>This measure was not implemented because ADEQ delayed the certification program indefinitely due to budgetary constraints.</p> <p>Maricopa County will support ADEQ's efforts (when ADEQ's budgetary constraints are lifted) to develop a program to certify and publicize companies that routinely demonstrate exceptional efforts to reduce airborne dust.</p> <p>As the regulatory authority, Maricopa County will provide verifications of eligible companies as necessary to implement this program and as requested by ADEQ.</p>	<p>State, County</p>
<p><b>6. Better defined tarping requirements in Rule 310 to include enclosure of the bed.</b></p>	<p>In March 2008, Maricopa County adopted Rule 310 and Rule 310.01 revisions in regard to tarping.</p> <p>Maricopa County changed the requirements regarding loading haul trucks (i.e., load all haul trucks such that at no time shall the highest point of the bulk material be higher than the sides, front, and back of the cargo container area).</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>7. Conduct mobile monitoring to measure PM-10 and issue NOVs.</b></p>	<p>In December 2008, Maricopa County filled 1 chemical engineering position for the mobile monitoring program. In February 2009, the mobile monitoring van was delivered to Maricopa County. Two deployments in 2009: (1) Fisher Sand and Gravel on 28th Street, and (2) Gas separating plant near Olive Avenue and El Mirage Road.</p>	<p>County</p>
<p><b>8. Conduct nighttime and weekend consistent inspections.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Although Maricopa County conducted nighttime and weekend inspections during 2008, the program was not fully implemented, as the department was focused on hiring and training additional staff.</p> <p>Nighttime and weekend inspections conducted in 2008 included complaint inspections and targeted inspections of specific industries that operate at night and on weekends.</p> <p>In 2009, Maricopa County initiated a pilot program to enhance the existing nighttime and weekend inspection program. The pilot program extended weekday inspection hours to include 4:00 to 6:00 a.m. and 5:00 to 8:00 p.m. and weekends from 6:00 a.m. to 2:30 p.m.. Following the pilot program, the County initiated a cross-training program for all inspectors to better utilize their abilities to deal with all circumstances and source types they may encounter. In January 2010, Maricopa County continued the enhanced nighttime and weekend inspection program.</p>	<p>County</p>
<p><b>9. Increase consistent inspection frequency for permitted sources.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>In March 2008, Maricopa County adopted Rule 280 revisions in regard to inspection frequency.</p> <p>In 2008, Maricopa County hired 55 staff: 32 inspectors, 13 administrative and permit technicians, 6 inspector supervisors, and 4 administrative supervisors for the Dust Control Compliance Program. Some staff reductions/reassignments occurred in 2009 due to the economic downturn and reduced workload. As of December 31, 2009, the MCAQD had 55 staff in the Dust Control Section (44 inspectors, 4 administrative, 6 supervisors, 1 manager).</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>9. Increase consistent inspection frequency for permitted sources - CONTINUED.</b></p>	<p>In October 2009, the MCAQD began implementation of a universal inspector program. From October 2009 through December 2010, the Applied Science Division (includes Dust Control Section and Stationary Source Section inspectors) implemented the Universal Inspector training program. All inspectors will be cross trained to conduct inspections on all source types. Therefore, MCAQD will no longer have staff dedicated to inspect only one specific source type such as dust or non-title V sources. By the end of 2009, 8 inspectors had been through the initial cross training.</p> <p>Maricopa County issued 7,160 permits for dust control sources (Rule 310).</p> <p>Maricopa County conducted 28,363 inspections of dust control permitted sources (Rule 310).</p> <p>In 2008, Maricopa County hired 5 inspectors for nonmetallic mineral processing facilities (Rule 316). These 5 inspector positions are included in the 32 inspector positions mentioned above. As of December 31, 2009, 37 of the total 44 inspectors in the Dust Control Section have been initially trained in conducting Rule 316 inspections.</p> <p>Maricopa County issued 247 permits for nonmetallic processing facilities (Rule 316).</p> <p>Maricopa County conducted 1,784 inspections of nonmetallic mineral processing facilities (Rule 316).</p>	
<p><b>10. Increase number of proactive consistent inspections in areas of highest PM-10 emissions densities.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Maricopa County conducted monitor surveillance on 13 days.</p>	<p>County</p>

<b>COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10</b>	<b>2008 and 2009 IMPLEMENTATION STATUS</b>	<b>IMPLEMENTING ENTITY</b>
<b>11. Notify violators more rapidly to promote immediate compliance.</b>	<p>Maricopa County Air Quality Department (MCAQD) continued the standard practice of dust compliance inspectors who observe potential violations making reasonable efforts to inform a person on-site or call the permit holder so that measures can be taken to prevent, reduce, or mitigate dust generation before a violation occurs.</p>	<p>County</p>
<b>12. Provide timely notification regarding high pollution days.</b>	<p>Maricopa County sent 2,037,301 text alerts and email messages to subscribers for high pollution advisories (HPAs) and health watches.</p> <p>Maricopa County posted news articles, related to particulate matter HPAs and health watches, on its website. Maricopa County website visits in 2008: 20,727 unique visitors; average pages visited = 3.24; average time spent = 2.22 minutes. Maricopa County website visits in 2009: 22,597 unique visitors; average pages visited = 2.22; average time spent = 1.18 minutes.</p> <p>In 2009, Maricopa County distributed 16 news releases regarding HPAs and health watches.</p>	<p>County</p>
<b>13. Develop a program for subcontractors.</b>	<p>Subcontractor program required by SB 1552. (A.R.S. § 49-474.06 A.)</p> <p>In March 2008, Maricopa County adopted Rule 200 and Rule 280 revisions in regard to the subcontractor registration program.</p> <p>In 2008, Maricopa County hired 4 permit technicians to administer the subcontractor registration program. These positions are included in the 55 positions noted in Committed Measure #9. In 2009, the subcontractor registration program was administered part time by two Permit Technician staff working in the Permitting Division of the Air Quality Department.</p> <p>Maricopa County registered 5,781 subcontractors.</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>14. Reduce dragout and trackout emissions from nonpermitted sources.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>In March 2008, Maricopa County adopted Rule 310.01 revisions in regard to dragout and trackout.</p> <p>Maricopa County added the requirement to install a trackout control device to sections covering unpaved parking lots and off-site hauling of bulk materials by livestock operations. Also, in Rule 310.01, Maricopa County added the definitions of "trackout/carryout" and "trackout control device".</p>	<p>County</p>
<p><b>15. Cover loads/haul trucks in Apache Junction.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>In early 2008, the City of Apache Junction adopted an ordinance to cover loads/haul trucks.</p>	<p>City of Apache Junction</p>
<p><b>16. Require dust coordinators at earthmoving sites of 5-50 acres.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Dust coordinator required by SB 1552. (A.R.S. § 49-474.05 A. &amp; E.)</p> <p>In March 2008, Maricopa County adopted Rule 310 and Rule 316 revisions in regard to dust coordinators.</p>	<p>County</p>
<p><b>36. Require barriers in addition to Rule 310 stabilization requirements for construction where all activity has ceased, except for sites in compliance with storm water permits.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>In March 2008, Maricopa County adopted Rule 310 revisions in regard to barriers.</p> <p>Maricopa County revised long-term stabilization control measures to reduce the period of inactivity to 30 days and added the requirement for barriers, if water is chosen as the control option.</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>37. Reduce the tolerance of trackout to 25 feet before immediate cleanup is required for construction sites be placed in Maricopa County Rule 310.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>In March 2008, Maricopa County adopted Rule 310 revisions in regard to the trackout requirements by reducing the toleration of trackout to 25 feet before cleanup is required.</p>	<p>County</p>
<p><b>38. No visible emissions across the property line be placed in Maricopa County Rule 310 and 310.01, and in local ordinances for nonpermitted sources appropriate.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>In March 2008, Maricopa County adopted Rule 310 and Rule 310.01 revisions in regard to visible emissions.</p> <p>One local government adopted an ordinance that restricts visible emissions from crossing property lines.</p>	<p>County, local governments</p>
<p><b>49. Allow Peace Officer enforcement of load covering.</b></p>	<p>SB 1552 amended existing state law to require that for the purpose of highway safety or air pollution prevention, a person shall not drive or move a vehicle on a highway unless the vehicle is constructed or loaded in a manner to prevent any of its load from dropping, sifting, leaking or otherwise escaping from the vehicle. (A.R.S. § 28-1098 A. - C.)</p>	<p>State</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<b>Industry</b>		
<p><b>17. Fully implement Rule 316.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>The Rule 316 litigation was settled on June 20, 2007. As a result, the June 8, 2005, version of Rule 316 was in place as of the settlement date. Maricopa County is enforcing the provision of Rule 316 for nonmetallic mineral processing sources of PM-10.</p> <p>In 2009, 37 of the 44 Dust Control Section inspectors had been fully trained to inspect Rule 316 sites.</p>	County
<p><b>39. Modeling cumulative impacts - The measure would need further definition by Maricopa County and the Arizona Department of Environmental Quality and be subject to input to ensure that unintended consequences for temporary uses are not created.</b></p>	<p>A draft Cumulative Modeling Policy was developed by the Maricopa County Air Quality Department and the Arizona Department of Environmental Quality in calendar year 2009. The draft policy was distributed for public review in February 2010.</p> <p>It is important to note that no emission reduction credit was quantified for this measure in the Five Percent Plan.</p>	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<b>Nonroad Activities</b>		
<p><b>18. Ban or discourage use of leaf blowers on high pollution advisory days.</b></p>	<p>Program to ban or discourage leaf blowers required by SB 1552. (A.R.S. § 9-500.04 A.5.(a). and A.R.S. § 11-877 A.1.)</p> <p>Maricopa County and 22 local governments have implemented programs that restrict or prohibit the use of leaf blowers on high pollution advisory days.</p>	<p>County, local governments</p>
<p><b>19. Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>Ordinance to prohibit off-road vehicle use required by SB 1552. (A.R.S. § 9-500.27 A.- E. and A.R.S. § 49-457.03)</p> <p>In February 2008, Maricopa County adopted the P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County Ordinance. This ordinance was developed to address dust concerns raised by vehicle use and trespass on private and public property. It is intended to complement Maricopa County Rule 310.01, which focuses on property owners' responsibility to maintain soil stabilization.</p> <p>In 2009, the Maricopa County Ordinance P-28 underwent revisions to its penalty structure in order to provide more flexibility in adjudicating cases. Revisions to the Ordinance P-28 were adopted in January 2011.</p> <p>While the ordinance was undergoing revisions, the County developed a common knowledge base on frequent complaint areas and their access points, enforcement history, ongoing outreach efforts by police departments, Justice Court procedures, and database needs. In addition to responding to complainants' concerns, MCAQD has organized a group of inspectors to gather this type of information and begin making direct contacts in the field. MCAQD plans to identify heavy use areas and research parcel ownership, and then contact property owners for installation of control measures, "no trespass" signs, and obtain authority to cite trespassers without land owner's presence. This is currently being done in conjunction with our existing vacant lot inspection program.</p>	<p>County, local governments</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p>19. <b>Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations - CONTINUED.</b></p>	<p>In 2009, MCAQD initiated efforts to develop a partnership with law enforcement agencies, not only to address the inspectors' limited authority on these contacts, but also to provide a consistent enforcement message to the public. Law enforcement agencies (Phoenix Police Department, Peoria Police Department, Maricopa County Flood Control District, and Maricopa County Sheriff's Office) have begun using this ordinance to initiate field contacts.</p> <p>MCAQD inspectors distribute off-road vehicle fact sheets in the field informally when contacts are made. County inspectors have also attended at least one off-road vehicle enthusiast event, partnering with Arizona State Trust Land staff to field questions from the public. County inspectors attended the AZGFD Expo in March 2009 and distributed off-road vehicle fact sheets.</p> <p>MCAQD indicated that high-use areas are generally located outside of city limits or on State Trust property; local police departments and Maricopa County Sheriff's Office (MCSO) have begun responding to some of these areas, supported by available funds from the Off-Highway Vehicle (OHV) Decal program (registration fees). MCAQD also indicated that funds from the OHV Decal program were being used by: (1) Maricopa Flood Control District to hire a deputy to enforce Maricopa County's P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County Ordinance, and (2) Arizona Game and Fish Department to hire two staff and train two more staff for enforcement of the P-28 ordinance.</p> <p>23 local governments have new or existing ordinances to prevent or discourage off-road vehicle use and restrict access to areas with high off-road vehicle use.</p> <p>ADEQ distributed 3,900 hard copies of "Nature Rules" map to OHV dealers and posted materials on the Arizona State Parks website (received 11,660 downloads/visits), Arizona State Land Department's website (received 6,251 visits), ADEQ's website (received 5,430 downloads/visits), and the Arizona Game and Fish Department website.</p>	

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p>19. <b>Reduce off-road vehicle use in areas with high off-road vehicle activity impoundment or confiscation of vehicles for repeat violations - CONTINUED.</b></p>	<p>Maricopa County, 17 local governments, and ADEQ, have conducted public education and outreach to discourage off-road vehicle use in the PM-10 nonattainment area.</p> <p>The Tonto National Forest included a segment on dust control education in its OHV training program.</p> <p>9 jurisdictions with high off-road activity have restricted vehicle use by installing signs and/or physical barriers.</p> <p>One local government: (1) Stabilized 57 acres with hydroseed and (2) Posted "No Trespassing" signs, installed berms, and/or stabilized 137 acres of vacant area, including two washes, with hydroseed. Two local governments fenced 16.25 acres to prevent vehicle access.</p> <p>In 2008, Arizona State Parks installed one kiosk and two access gates; replaced 1 mile of fencing; provided outreach at 77 official events; and provided 3,100 public information contacts. In 2008, Arizona Game and Fish Department issued 27 citations for violations of the OHV law.</p> <p>In 2008, the Arizona State Land Department (ASLD) spent \$159,203 to implement the following control measures: installation of 1,037 linear feet of concrete barriers; installation of 7,352 linear feet of chain link fence; purchase of 300 "No Trespassing" signs; purchase and installation of two 10-foot gates; posting of 38 "Area Closed by Commissioners Orders" signs; posting of 2 "Closed for Soil Stabilization" signs; posting of 14 "No Trespassing" signs; and increased the presence of law enforcement.</p> <p>In 2009, ASLD posted 53 "No Trespassing" signs and 30 area closure signs. ASLD also installed 3,770 linear feet of chain link fence around closed areas. In 2009, the U.S. Forest Service installed three gates to limit unauthorized OHV access in the Tonto National Forest.</p>	

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>20. Provide incentives to retrofit nonroad diesel engines and encourage early replacements with advanced technologies.</b></p>	<p>In 2007, the Arizona Legislature adopted Senate Bill 1552 which included a voluntary diesel equipment retrofit program. (A.R.S. § 49-474.07 A. - D.)</p> <p>According to A.R.S. § 49-474.07 A., a County with a population of more than four hundred thousand persons shall operate and administer a voluntary diesel emissions retrofit program in the county for the purpose of reducing particulate emissions from diesel equipment. The program shall provide for real and quantifiable emissions reductions based on actual emissions reductions by an amount greater than that already required by applicable law, rule, permit or order and computed based on the percentage emissions reductions from the testing of the diesel retrofit equipment prescribed in Subsection C as applied to the rated emissions of the engine and using the standard operating hours of the equipment.</p> <p>Maricopa County Air Quality Department (MCAQD) has indicated that A.R.S. § 49-474.07 did not establish a fund to provide incentives to retrofit nonroad engines, but rather established provisions applicable to permitted stationary source diesel powered equipment. Under the provisions of ARS 49-474.07, the permittee may retain one-half of the particulate emissions reductions from retrofit of diesel equipment operated at the permitted site for purposes of receiving a permit modification or a new permit provision that allows for extended hours of operation for the permitted equipment. The provisions of ARS § 49-747.07 are undergoing legal review and analysis during the current statewide new source review rulemaking, and if implemented, will require revision of MCAQD's stationary source permitting program and applicable rules. However, this review and analysis has no bearing on the Five Percent Plan or on Committed Measure #20.</p> <p>It is important to note that no emission reduction credit was quantified for this measure in the Five Percent Plan.</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>21. Ban leaf blowers from blowing debris into streets.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.5.(b)., A.R.S. § 11-877 A.2., and A.R.S. § 49-457.01 B.)</p> <p>In February 2008, Maricopa County adopted the P-25 Leaf Blower Restriction Ordinance to ban leaf blowers from blowing debris into streets in Maricopa County. In 2009, 17 of the 44 MCAQD's Dust Control Section Inspectors were trained to enforce the leaf blower ordinance.</p> <p>In addition, 23 local governments have new or existing ordinances to ban leaf blowers from blowing debris into streets.</p>	<p>County, local governments</p>
<p><b>22. Implement a leaf blower outreach program.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Leaf blower outreach program required by SB 1552. (A.R.S. § 49-457.01 D., E. and F.)</p> <p>ADEQ produced and distributed 8,000 hard copies of leaf blower fact sheets to six retail leaf blower outlets.</p> <p>In addition, retailers and equipment rental businesses throughout Area A were provided with electronic copies of ADEQ's 'Pointers on Operating a Leaf Blower' with the expectation they would print and distribute the handout at points of sale and rental.</p> <p>ADEQ distributed warning signs for posting on HPA days to leaf blower rental outlets.</p> <p>ADEQ authored an article about the unsafe use of leaf blowers that was published in the Arizona Landscape Contractors Association's (ALCA) Influence magazine. A public-awareness advertisement was published in the ALCA Influence and Southwest Horticulture magazines.</p>	<p>State</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>22. Implement a leaf blower outreach program - CONTINUED.</b></p>	<p>ADEQ's leaf blower outreach materials, which were posted on the agency's website (<a href="http://www.azdeq.gov/environ/air/prevent/index.html">www.azdeq.gov/environ/air/prevent/index.html</a>), received a total of 14,980 visits. ADEQ adapted and posted a leaf blower training manual, provided by the Outdoor Power Equipment Institute, on ADEQ's website. Those materials received 2,884 downloads/visits.</p> <p>A number of cities and towns also conduct leaf blower outreach as part of the efforts reported in Committed Measure #1.</p>	
<p><b>23. Ban ATV use on high pollution days.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>All terrain vehicle (ATV) ban on high pollution days required by SB 1552. (A.R.S. § 49-457.03)</p> <p>ADEQ distributed High Pollution Advisory (HPA) forecasts to subscribers and to the U.S. Forest Service, U.S. Bureau of Land Management, Arizona State Land Department, Arizona Game and Fish Department, Arizona State Parks Department, and the Maricopa County Air Quality Department. ADEQ also posted HPA forecasts and warnings on the agency's website and works with television broadcast stations to communicate HPA notices to the public.</p> <p>On February 27, 2009, Fox Motorsports filmed a half-hour program focused on off-highway vehicle (OHV) use and the 5% Plan requirements on High Pollution Advisory Days. Representatives of ADEQ, MCAQD, Arizona Game and Fish, Arizona State Lands, U.S. Bureau of Land Management and the Arizona Rock Products Association were filmed near the Hassayampa River for this program. Broadcast date has not yet been scheduled.</p> <p>ADEQ: "Law enforcement officers who are authorized under Title 28 will enforce this requirement. On Federal Lands, the Federal agency with jurisdiction enforces it". In 2009, the police departments of Peoria and Phoenix issued a total of 132 warnings and 35 citations for violations of the OHV ban on PM-10 HPA days.</p>	<p>State</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>45. Prohibit use of leaf blowers on unstabilized surfaces.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Ordinance required by SB 1552. (A.R.S. § 11-877 A.3. and A.R.S. § 49-457.01 C.)</p> <p>In February 2008, Maricopa County adopted Ordinance P-25 to prohibit use of leaf blowers on unstabilized surfaces. In 2009, 17 of 44 MCAQD's Dust Control Section inspectors were trained to enforce the leaf blower ordinance. In addition, a local government, although not required, adopted this ordinance.</p>	<p>County</p>
<p><b>46. Outreach to off-road vehicle purchasers.</b></p>	<p>The Arizona State Parks Department has convened a Dealer Pilot Program Committee to develop printed dust abatement educational materials for off-road vehicle renters/purchasers. ADEQ participates in these committee meetings.</p>	<p>State</p>
<p><b>Paved Roads</b></p>		
<p><b>24. Sweep street with PM-10 certified street sweepers.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>SB 1552 requires that new or renewed contracts for street sweeping on city streets must be conducted with PM-10 certified street sweepers. (A.R.S. § 9-500.04 A.9. and A.R.S. § 49-474.01 A.8.)</p> <p>The three local governments, that issue street sweeping contracts, require that their contractors use PM-10 certified street sweepers.</p> <p>Effective February 20, 2010, ADOT's contract for sweeping State Highways requires use of PM-10 certified street sweepers.</p> <p>Maricopa County uses its PM-10 certified street sweeping contract to routinely sweep 700 miles (1,400 curb miles) of streets.</p> <p>Local governments purchased 19 PM-10 certified street sweepers with CMAQ funds and 4 PM-10 certified street sweepers with other funds.</p>	<p>State, County, local governments</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>52. Coordinate public transit services with Pinal County.</b></p>	<p>ADOT has coordinated public transit services with Pinal County. See the following websites for information regarding this coordination:</p> <p>(1) Arizona Rural Transit Needs Study Final Report - May 2008 (<a href="http://www.azdot.gov/mpd/Community_Grant_Services/PDF/Rural_Transit_Needs_Study_Final_Report_May_2008.pdf">http://www.azdot.gov/mpd/Community_Grant_Services/PDF/Rural_Transit_Needs_Study_Final_Report_May_2008.pdf</a>)</p> <p>(2) Maricopa 5311 information (<a href="http://www.azdot.gov/MPD/Community_Grant_Services/Maricopa.asp">http://www.azdot.gov/MPD/Community_Grant_Services/Maricopa.asp</a>)</p> <p>Total coordinated public transit funding from all sources in 2009 for the following entities in Pinal County:</p> <ul style="list-style-type: none"> <li>• Coolidge - \$506,578</li> <li>• Maricopa - \$788,405</li> </ul> <p>Total coordinated public transit funding from all sources in 2009 for the following areas outside of the PM-10 nonattainment area within Maricopa County:</p> <ul style="list-style-type: none"> <li>• Salt River Pima-Maricopa Indian Community - \$380,361</li> <li>• RPTA Wickenburg Rte - \$315,645</li> </ul>	<p>State</p>
<p><b>53. Repave or overlay paved roads with rubberized asphalt.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>ADOT repaved 12.5 miles of State Highways with rubberized asphalt pavement (7.29 miles more than the commitment).</p>	<p>State</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Unpaved Parking Lots		
<p><b>25. Pave or stabilize existing unpaved parking lots.</b> Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.6. &amp; A.7. and A.R.S. § 49-474.01 A.5. &amp; A.6.)</p> <p>Maricopa County revised parking lot provisions in Rule 310.01 (Fugitive Dust from Non-traditional Sources of Fugitive Dust) to synchronize with SB 1552 requirements. These rule revisions were adopted in March 2008.</p> <p>23 local governments have new or existing ordinances to require paving or stabilizing existing unpaved parking lots.</p> <p>254 Maricopa County and local government staff are enforcing ordinances to require paving or stabilizing existing unpaved parking lots.</p> <p>All staff in Maricopa County's Dust Control Section have been trained on inspecting unpaved parking lots. Currently, inspectors conduct monthly "Sweeps". A sweep is a one-day focused effort where all 44 Dust Control Section inspectors conduct inspections of vacant lots and unpaved parking lots in Maricopa County. In 2009, 16 sweeps were conducted yielding 536 unpaved parking lot inspections and 12,013 inspections of vacant lots. In 2008, 186 unpaved parking lot inspections and 5,005 vacant lot inspections were conducted. A total of 722 unpaved parking lot inspections and 17,018 vacant lot inspections were conducted during 2008 and 2009.</p> <p>Three local governments paved 13.57 acres of unpaved parking lots.</p> <p>One local government:</p> <ul style="list-style-type: none"> <li>• Stabilized 9.40 acres of unpaved parking lots with turf; and</li> <li>• Stabilized 10.65 acres of unpaved parking lots with a polymer stabilizer.</li> </ul> <p>One local government paved/stabilized eight existing town-owned unpaved parking lots with a total surface area of 7.81 acres.</p>	<p>County, local governments</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Unpaved Roads, Alleys, and Shoulders		
<p>26. <b>Pave or stabilize existing public dirt roads and alleys.</b> Quantified for numeric credit as a contingency measure.</p>	<p>Plan requirements for paving or stabilizing public dirt roads and alleys were amended by SB 1552. (A.R.S. § 9-500.04 A.3. and A.R.S. § 49-474.01 A.4.)</p> <p>In March 2008, Maricopa County adopted Rule 310.01 revisions in regard to unpaved roads and alleys.</p> <p>Maricopa County and 20 local governments have developed or updated plans to pave or stabilize targeted public dirt roads and alleys.</p> <p>Maricopa County and local governments have implemented this measure for:</p> <p><u>Public Dirt Roads</u></p> <p>By paving 32.38 miles of public dirt roads (5.18 miles more than the commitments) and stabilizing 40.76 miles of public dirt roads (11.27 miles more than the commitments), with a total of 73.14 miles of public dirt roads paved or stabilized (16.45 miles more than the commitments).</p> <p><u>Dirt Alleys</u></p> <p>By paving 71.77 miles of dirt alleys (8.33 miles more than the commitments) and stabilizing 273.97 miles of dirt alleys (157.62 miles more than the commitments) with a total of 345.74 miles of dirt alleys paved or stabilized (165.95 miles more than the commitments).</p> <p>One local government improved 9 intersections by paving turn lanes and/or shoulders.</p>	<p>County, local governments</p>
<p>27. <b>Limit speeds to 15 miles per hour on high traffic dirt roads.</b> Quantified for numeric credit as a contingency measure.</p>	<p>Maricopa County and 5 local governments have posted 56.91 miles of dirt roads and alleys with 15 mph (or less) speed limit signs (28.85 miles more than the commitments).</p> <p>Several jurisdictions report that all high traffic dirt roads have been paved.</p>	<p>County, local governments</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>28.   Pave or stabilize unpaved shoulders.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Plan requirements to pave or stabilize unpaved shoulders were amended by SB 1552. (A.R.S. § 9-500.04 A.3. and A.R.S. § 49-474.01 A.4.)</p> <p>Maricopa County and 20 local governments have developed or updated plans to pave or stabilize unpaved shoulders on targeted arterials.</p> <p>ADOT, Maricopa County, and local governments implemented this measure by paving 271.31 curb miles of dirt shoulders (200.31 curb miles more than the commitments) and stabilizing 403.98 curb miles of dirt shoulders (218.23 curb miles more than the commitments).</p> <p>ADOT added 94.26 curb miles of curb and gutter (Note: These 94.26 curb miles are included in the paving of 271.31 curb miles of dirt shoulders.)</p> <p>One local government improved 9 intersections by paving turn lanes and/or shoulders.</p>	<p>County, State, local governments</p>
<p><b>43.   MAG allocate \$5 million in FY 2007 MAG federal funds matched on a 50/50 basis by MAG member agencies for paving dirt roads and shoulder projects and that these projects be immediately submitted to MAG for consideration at the July meetings of the MAG Management Committee and Regional Council for an amendment to the Transportation Improvement Program. These funds would be on a nonsupplanting basis for new projects.</b></p> <p>Quantified for numeric credit as a contingency measure.</p>	<p>\$5 million is programmed in the FY 2007-2011 MAG Transportation Improvement Program to fund 9 projects that pave dirt roads and shoulders in the PM-10 nonattainment area.</p>	<p>MAG, local governments</p>
<p><b>51.   Conduct an inventory of dirt roads, alleys and estimated traffic counts.</b></p>	<p>The City of El Mirage developed a preliminary inventory of unpaved roads in its jurisdiction. In addition, other local governments, although not required, developed preliminary inventories of their unpaved roads.</p>	<p>local government</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<b>Unpaved Surfaces</b>		
<p><b>29. Create a fund for paving and stabilizing in high pollution areas.</b></p>	<p>Eleven of Maricopa County's settlement agreements for air quality violations included supplemental environmental projects.</p>	<p>County</p>
<p><b>40. MAG member agencies reexamine existing ordinances to ensure that nonpermitted sources, such as unpaved parking, unpaved staging areas, unpaved roads, unpaved shoulders, vacant lots and open areas, receive priority attention.</b></p>	<p>One local government re-examined existing ordinances to ensure non-permitted sources received priority attention.</p>	<p>MAG member agencies</p>
<b>Vacant Lots</b>		
<p><b>30. Strengthen and increase enforcement of 310.01 for vacant lots.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Maricopa County hired a supervisor to oversee the vacant lot program. This staff position was also included in the data provided for Committed Measures #4 and #9.</p> <p>All 44 inspectors in MCAQD's Dust Control Section have been trained to inspect vacant lots. Currently, inspectors conduct monthly "Sweeps". A sweep is a one-day focused effort where all 44 Dust Control Section inspectors conduct inspections of vacant lots and unpaved parking lots throughout Maricopa County.</p> <p>Maricopa County conducted 17,018 vacant lot inspections.</p>	<p>County</p>

<b>COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10</b>	<b>2008 and 2009 IMPLEMENTATION STATUS</b>	<b>IMPLEMENTING ENTITY</b>
<p><b>31. Restrict vehicular use and parking on vacant lots.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Ordinance required by SB 1552. (A.R.S. § 9-500.04 A.8. and A.R.S. § 49-474.01 A.7.)</p> <p>In February 2008, Maricopa County adopted the P-27 Vehicle Parking and Use on Unstabilized Vacant Lots Ordinance. Currently, Ordinance P-27 is undergoing revisions to its penalty structure, which is intended to provide more flexibility in adjudicating cases. In addition, 23 local governments have new or existing ordinances to prohibit vehicle trespass on vacant land.</p>	<p>County, local governments</p>
<p><b>32. Enhanced enforcement of trespass ordinances and codes.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>In February 2008, Maricopa County adopted the P-28 Off-Road Vehicle Use in Unincorporated Areas of Maricopa County and the P-27 Vehicle Parking and Use on Unstabilized Vacant Lots ordinances. Currently, both ordinances are undergoing revisions to their penalty structure, which is intended to provide more flexibility in adjudicating cases.</p> <p>Maricopa County will combine the enforcement of the P-27 Vehicle Parking and Use Ordinance with the Vacant Lot Sweep Program. Currently, field staff continue outreach (distribution of fact sheets on parked vehicles) while the penalty structure of the ordinance is being updated. The details of the enforcement component are also being integrated into Maricopa County's "Accela" software, which will allow for a smoother transition of the program.</p> <p>In addition, 18 local governments report increased enforcement of vehicle trespass ordinances and codes for vacant lots.</p>	<p>County, local governments</p>
<p><b>33. Ability to assess liens on parcels to cover the costs of stabilizing them (Recover costs of stabilizing vacant lots).</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>SB 1552 requires rule revisions for stabilization of disturbed surfaces of vacant lots. (A.R.S. § 49-474.01 A.11.)</p> <p>Maricopa County adopted Rule 310.01 revisions in March 2008 to incorporate A.R.S. § 49-474.01 A.11. to allow the County to recover stabilization costs through the penalty process.</p>	<p>County</p>

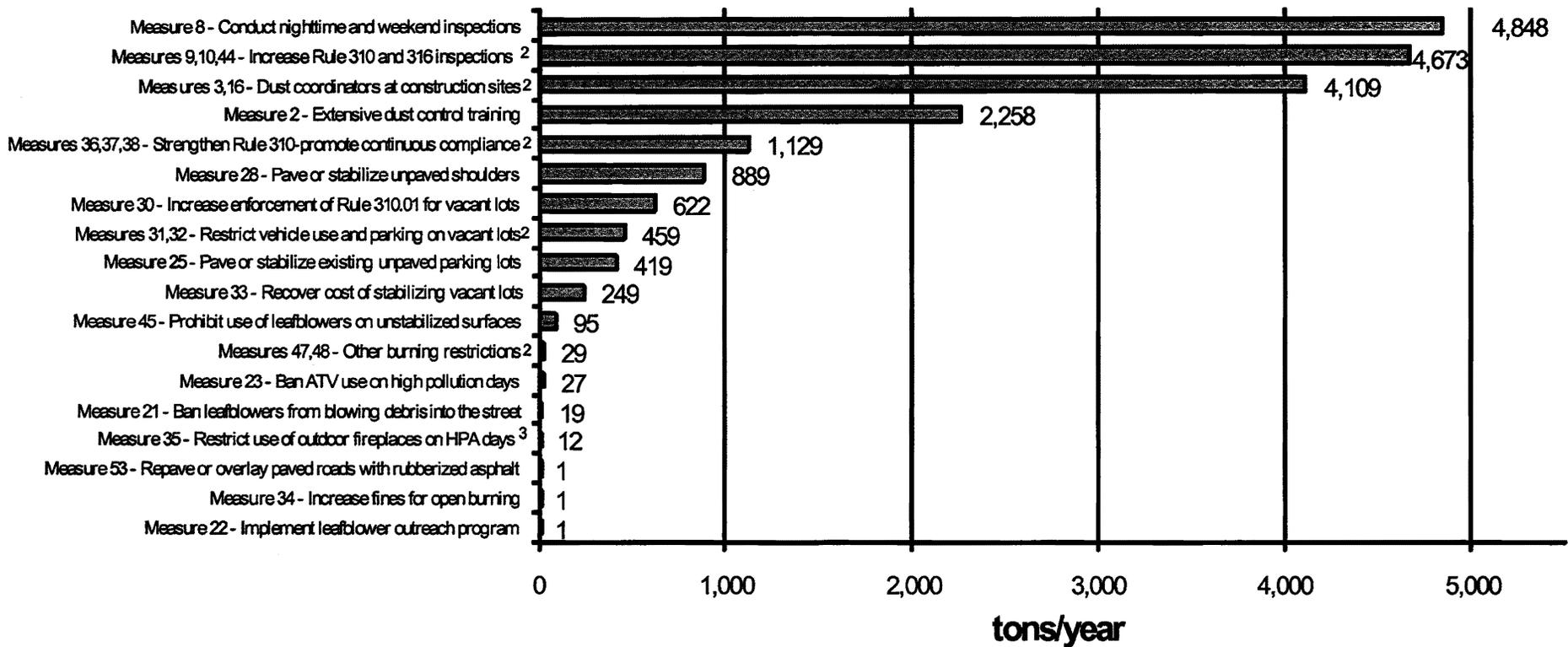
COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
Open Burning / Woodburning		
<p><b>34. Increase fines for open burning.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>SB 1552 requires increasing the fines for unlawful open burning. (A.R.S. § 11-871 D.4. and A.R.S. § 49-501 G.)</p> <p>In March 2008, Maricopa County revised the P-26 Residential Woodburning Restriction Ordinance to increase the civil penalty to \$250 for the fourth or any subsequent violation of the ordinance in accordance with Senate Bill 1552.</p> <p>Maricopa County responded to 365 illegal open burning complaints and 77 wrongful fireplace use complaints which resulted in 19 documented violations of Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) and 26 warnings for violations of Ordinance P-26 (Residential Woodburning Restriction Ordinance).</p>	County
<p><b>35. Restrict use of outdoor fireplaces and pits and ambience fireplaces in the hospitality industry.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>SB 1552 requires Maricopa County to prohibit use of wood-burning chimineas, outdoor fire pits, and similar outdoor fires on County No-Burn Days. (A.R.S. § 49-501 F.)</p> <p>In March 2008, Maricopa County adopted revisions to P-26 (Residential Woodburning Restriction Ordinance) and Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) to restrict use of outdoor fireplaces and pits and ambience fireplaces in the hospitality industry.</p>	County

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<p><b>47. Ban open burning during the ozone season.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Open burning ban from May 1 through September 30 each year required by SB 1552. (A.R.S. § 49-501 A.2.)</p> <p>In March 2008, Maricopa County implemented an open burning ban during the ozone season by adding these requirements to Rule 314 (Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments) and to P-26 (Residential Woodburning Restriction Ordinance).</p>	<p>County</p>
<p><b>48. Require residential woodburning ordinances to include no burn restrictions on high pollution advisory days.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Revision of County ordinance required by SB 1552. (A.R.S. § 11-871 B.)</p> <p>The "no burn restrictions on HPA days" was already a requirement in Maricopa County's Residential Woodburning Restriction ordinance (P-26 ordinance).</p> <p>Note: Maricopa County revisions to the Residential Woodburning Ordinance, adopted in March 2008, pertained to Committed Measure #35.</p> <p>See Committed Measure #34 for data on complaints received by the County in regard to open burning and wrongful fireplace use.</p>	<p>County</p>

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
<b>Agriculture</b>		
<p><b>41. Forward to the Governor's Agricultural Best Management Practices Committee that cessation of tilling be required on high wind days and that agricultural best management practices be required in existing Area A.</b></p>	<p>Agricultural Best Management Practices required in Area A by SB 1552. (A.R.S. § 49-457 H. &amp; N.6. and A.R.S. § 49-542 Sec. 20.)</p> <p>On September 25, 2007, the Governor's Agricultural Best Management Practices (BMP) Committee revised its rule to double the number of BMPs that farmers must implement, added 5 BMP choices (including cessation of tilling on High Pollution Advisory Days), and expanded the area for BMPs.</p> <p>Arizona State Rules 18-2-610 and 611 were revised, effective November 14, 2007, to comply with Senate Bill (SB) 1552. The Legislature adopted a requirement in SB 1552 that expanded the regulated area for Agricultural BMPs to include the portion of Area A in Maricopa County and increased the number of required Agricultural BMPs from one to two from each category by December 31, 2007.</p>	State
<p><b>42. The Arizona State Legislature provide funding to the Arizona Department of Environmental Quality for four agriculture dust compliance officers for a total of five inspectors.</b></p>	<p>ADEQ indicated that expenditure authority for these four positions is no longer available to ADEQ.</p>	State
<p><b>50. Require two agricultural best management practices.</b> Quantified for numeric credit as a contingency measure.</p>	<p>Required by SB 1552. (A.R.S. § 49-457 H. &amp; N.6. and A.R.S. § 49-542 Sec. 20.)</p> <p>Arizona State Rules 18-2-610 and 611 were revised, effective November 14, 2007, to comply with Senate Bill (SB) 1552.</p> <p>The Legislature adopted a requirement in SB 1552 that expanded the regulated area for Agricultural BMPs to include the portion of Area A in Maricopa County and increased the number of required Agricultural BMPs from one to two from each category by December 31, 2007.</p>	State

COMMITTED MEASURE IN THE MAG 2007 FIVE PERCENT PLAN FOR PM-10	2008 and 2009 IMPLEMENTATION STATUS	IMPLEMENTING ENTITY
All Sources		
<p>44. <b>Maricopa County should increase consistent enforcement in areas where PM-10 violations continue to occur, along with efforts throughout the region. When an area continually experiences higher PM-10 concentrations than other areas, increased enforcement in areas experiencing high monitor readings is needed to protect public health.</b></p> <p>Quantified for numeric credit to meet the five percent per year target and demonstrate attainment.</p>	<p>Maricopa County has increased consistent enforcement in areas where PM-10 violations continue to occur.</p> <p>In March 2008, Maricopa County revised Rule 280 (Fees) to cover increased staffing levels for the MCAQD as a result of Maricopa County's Five Percent Plan commitments.</p> <p>In 2009, the MCAQD Dust Control Section implemented the "Monitor Project". The focus of the Monitor Project was to concentrate inspectors' efforts within a 2-mile radius of several MCAQD monitoring stations (W. 43rd Ave., Durango, South Phoenix, Higley, Buckeye and Zuni Hills). Inspectors conducted inspections of all permitted sites within the 2-mile radius as well as monitored other dust generating activity. The frequency of inspections differed per monitoring station and varied from 3 inspections per week to one inspection per week.</p>	<p>County</p>

**Figure 1**  
**Reductions in 2010 for Committed Control Measures**  
**in the Five Percent Plan for PM-10<sup>1</sup>**

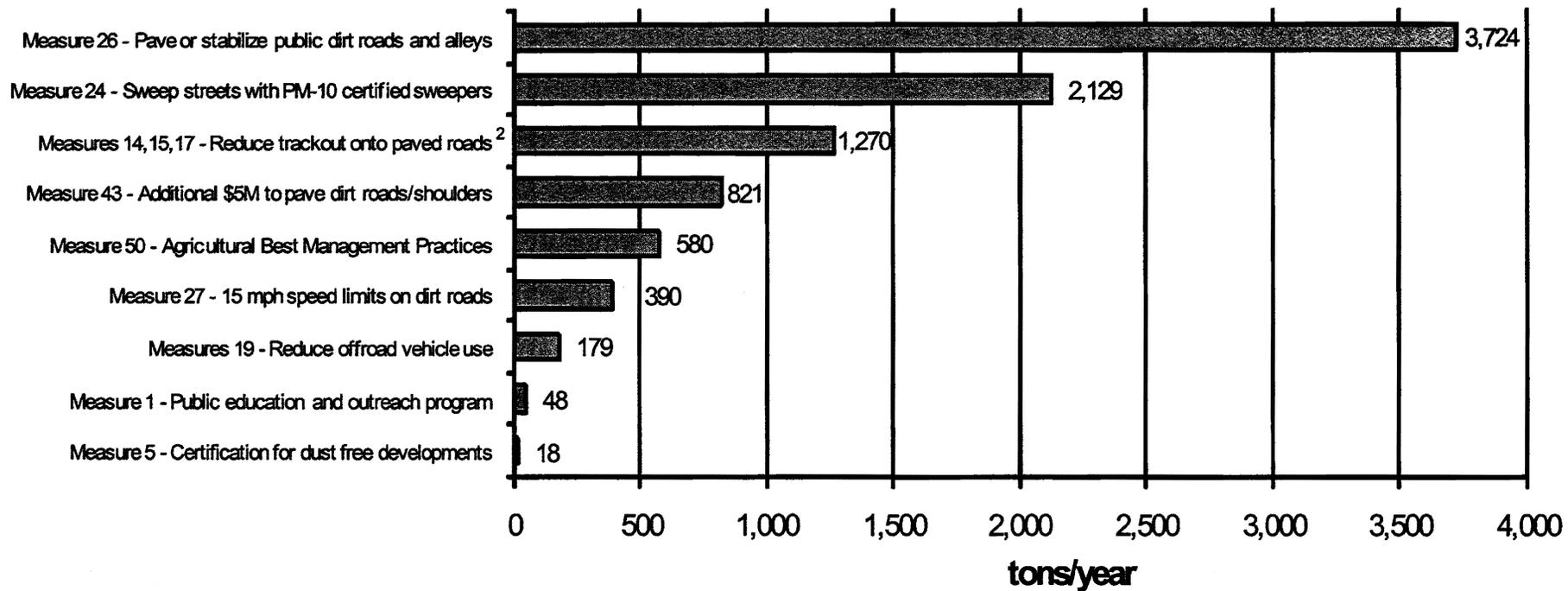


<sup>1</sup>Committed measures quantified for numeric credit to meet the five percent per year target and demonstrate attainment.

<sup>2</sup>In these cases, the emission reductions represent the combined impact of multiple, reinforcing measures.

<sup>3</sup>HPA days = high pollution advisory days

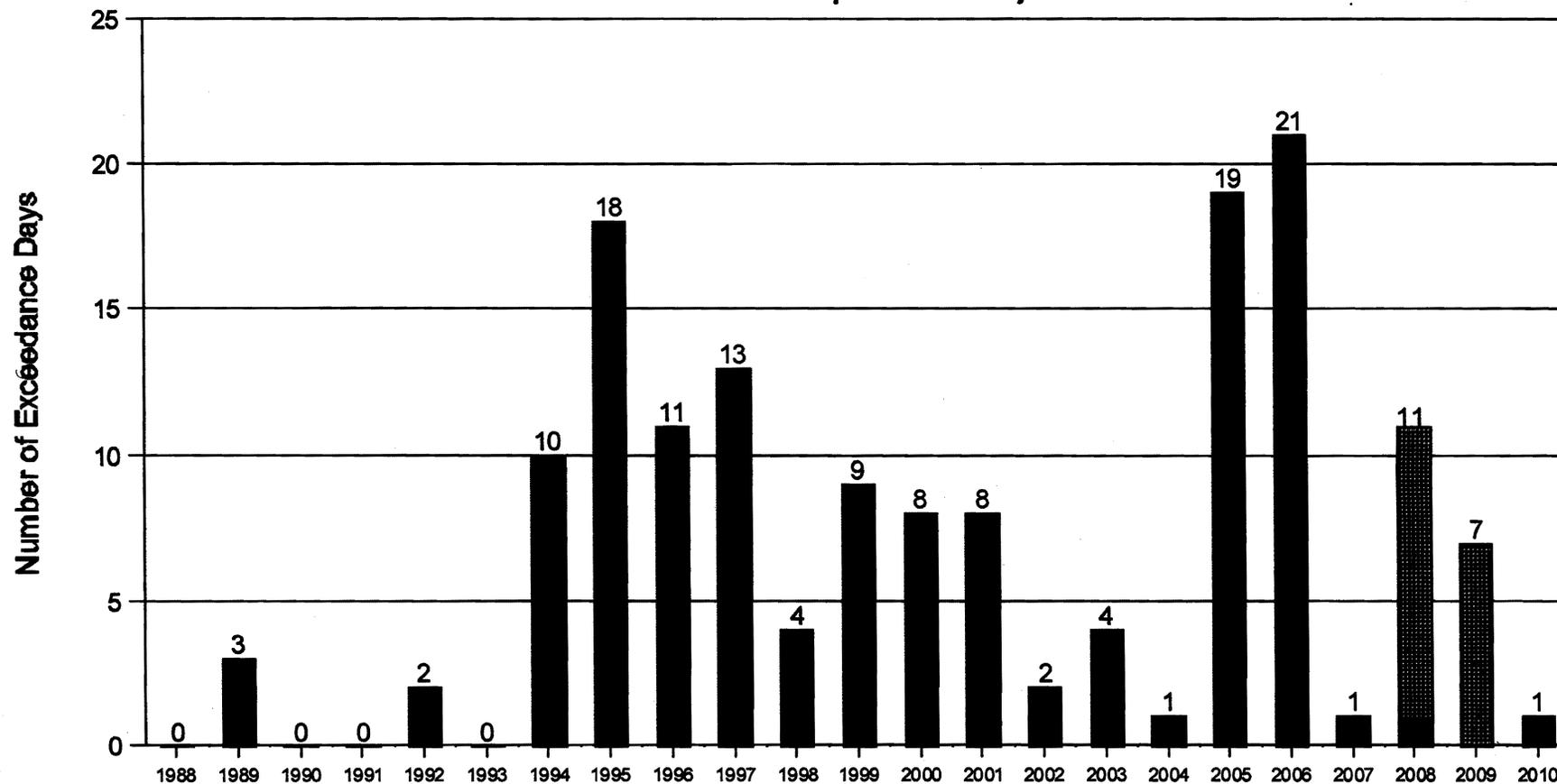
**Figure 2**  
**Reductions in 2010 for Contingency Measures**  
**in the Five Percent Plan for PM-10<sup>1</sup>**



<sup>1</sup>Committed measures quantified for numeric credit as contingency measures.

<sup>2</sup>For "Reduce trackout onto paved roads," the emission reduction represents the combined impact of Measures 14,15 and 17.

**Figure 3**  
**PM-10 Monitoring Data**  
**Days Exceeding the 24-Hour PM-10 Standard in**  
**Maricopa County**



**Notes:**

1. The hatched areas represent exceedance days in 2008 and 2009 that ADEQ has indicated are exceptional/natural events, but have not been approved by EPA. ADEQ has documented 10 exceedance days in 2008 as exceptional/natural events; ADEQ has not yet documented the 7 exceedance days in 2009 as exceptional/natural events.
2. For 2010, ADEQ is currently evaluating the one exceedance day, at the Greenwood monitor, to determine if it was an exceptional/natural event.
3. Exceedance days that have been approved by EPA as exceptional/natural events have been removed from this chart.
4. Most of the exceedances before 2004 were recorded by filter-based monitors that measured PM-10 concentrations on every sixth day. Since 2004, the filter-based monitors that exceeded the PM-10 standard have been replaced with monitors that measure PM-10 concentrations every day.
5. The chart includes exceedance days at the Buckeye monitor which is outside the PM-10 nonattainment area.
6. The 2007 exceedance occurred at the Buckeye monitor and the 2008 exceedance, which was not flagged, occurred at the Durango Complex monitor.

**ATTACHMENT**

**MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE  
MARICOPA COUNTY NONATTAINMENT AREA**

**EXECUTIVE SUMMARY**

**MAG 2007 FIVE PERCENT PLAN FOR PM-10 FOR THE  
MARICOPA COUNTY NONATTAINMENT AREA**

**EXECUTIVE SUMMARY**



## **MAG 2007 FIVE PERCENT PLAN FOR PM-10 EXECUTIVE SUMMARY**

Within the Maricopa County nonattainment area, the National Ambient Air Quality Standard has not yet been attained for PM-10 particulate pollution. The Maricopa Association of Governments was designated by the Governor of Arizona in 1978 and recertified by the Arizona Legislature in 1992 to serve as the Regional Air Quality Planning Agency to develop plans to address air pollution problems.

Based upon the 1990 Clean Air Act Amendments, the Maricopa County nonattainment area was initially classified as Moderate for PM-10 particulate pollution. However, on May 10, 1996, the nonattainment area was reclassified to Serious due to failure to attain the particulate standard by December 31, 1994. The Serious Area reclassification was effective on June 10, 1996.

The Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area was submitted to the Environmental Protection Agency (EPA) in February 2000. On July 25, 2002, EPA published a notice of final approval for the plan. Collectively, the plan contained approximately seventy-seven committed control measures from the State and local governments. The plan demonstrated attainment of the PM-10 standard by December 31, 2006.

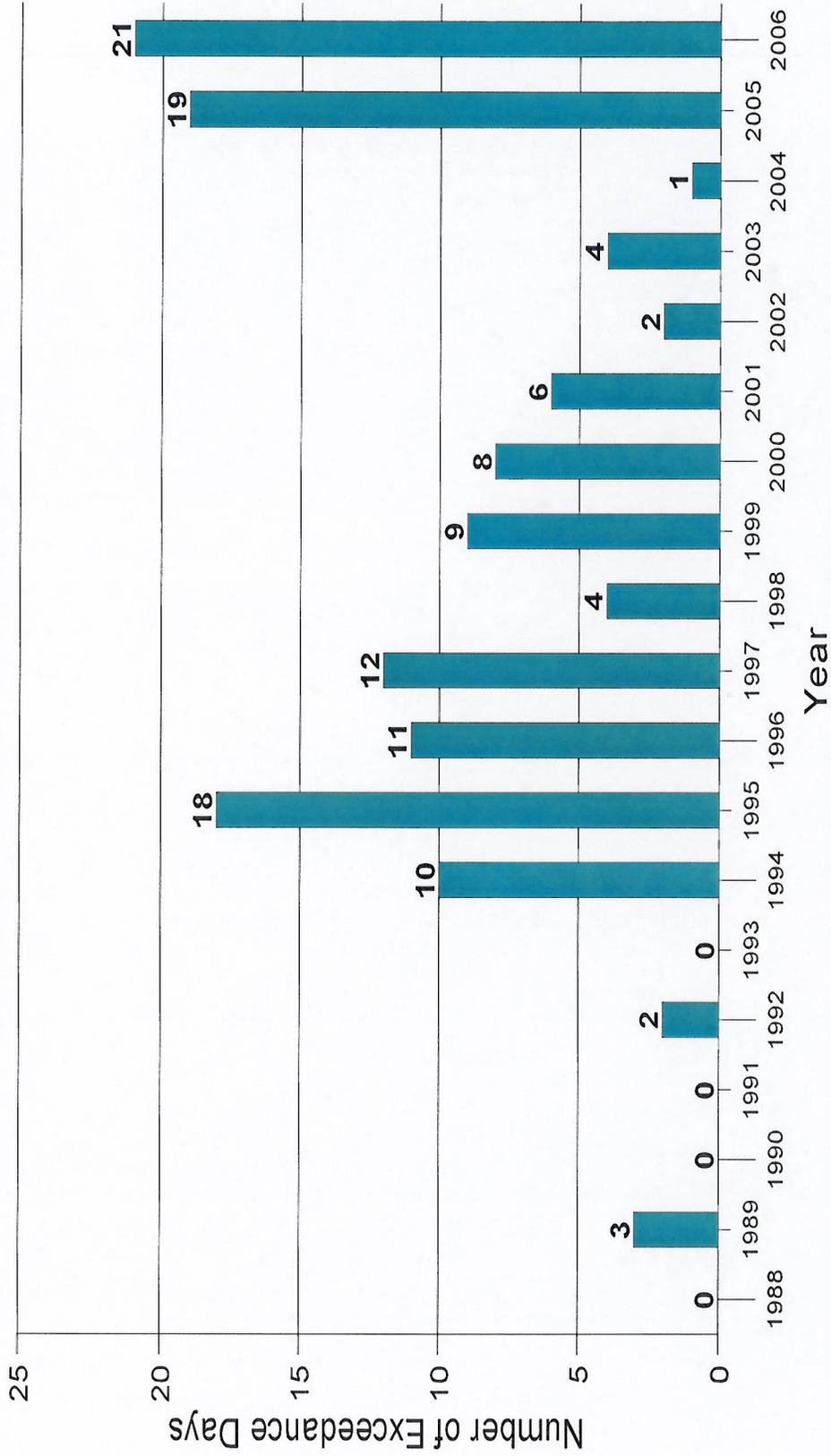
In order to be in attainment, the region needed three years of clean data at the monitors for 2004, 2005, and 2006. However, there were numerous exceedances of the 24-hour standard in 2005 and 2006. On June 6, 2007, EPA published a final notice with its findings that the Maricopa County nonattainment area had failed to attain the PM-10 standard by the federal deadline of December 31, 2006.

In accordance with Section 189 (d) of the Clean Air Act, the Five Percent Plan for PM-10 is due to the Environmental Protection Agency by December 31, 2007. The plan is required to reduce PM-10 emissions by at least five percent per year until the standard is attained as measured by the monitors. The Clean Air Act specifies that the plan must be based upon the most recent emissions inventory for the area and also include a modeling demonstration of attainment.

Particulate air pollution can occur throughout the year. The formation of PM-10 particulate pollution is dependent upon several factors. Among these factors are stagnant masses, severe temperature inversions in the winter, high winds in the summer, and fine, silty soils characteristic of desert locations. In the Maricopa County nonattainment area, particulate matter (PM-10) concentrations are elevated during various seasons of the year and under different weather conditions. The variability is due to the diverse composition of PM-10 and the sources contributing to this diversity.

The trend in PM-10 levels for the Maricopa County nonattainment area is presented in Figure ES-1. The 24-hour PM-10 standard is 150 micrograms per cubic meter. In 2004,

**FIGURE ES-1**  
**NUMBER OF 24-HOUR PM-10 EXCEEDANCE DAYS**



Note: The Arizona Department of Environmental Quality began flagging natural and exceptional events in 2004. Exceedances that have been approved or are pending approval by EPA as natural or exceptional events have been removed from this chart.

Sources: 1988 - 1997 - Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, February 2000.  
 1998 - 2006 - EPA Air Quality System; Maricopa County Network Reviews; ADEQ Air Quality Reports.

there was one exceedance day of the 24-hour standard. However, in 2005 there were 19 exceedance days and in 2006 there were 21 exceedance days of the 24-hour standard. Figure ES-2 indicates the monitors where exceedances occurred. The violations of the standard at the Bethune Elementary School, Durango Complex, and West 43<sup>rd</sup> Avenue monitors caused the region to fail to attain the PM-10 standard by the December 31, 2006 attainment date.

A rigorous planning effort was conducted to prepare the MAG 2007 Five Percent Plan for PM-10. An extensive Preliminary Draft Comprehensive List of Measures was compiled for evaluation. The MAG Analysis of Particulate Control Measure Cost Effectiveness report provided an evaluation of forty-six control measures. For each measure, the following information was prepared: narrative description; suggested implementing entity; estimate of the cost of implementation; estimate of the PM-10 emission reduction potential; estimate of the cost effectiveness (\$/ton of PM-10 reduced); and discussion of implementation issues and comments. In preparing the information for the analysis, measures from other PM-10 Serious Areas were reviewed and contacts were established. Relevant dust control literature reviews were performed to obtain data on measured emission reductions. Contacts were established with local agencies and businesses in Maricopa County to determine the cost of labor, equipment, materials, etc.

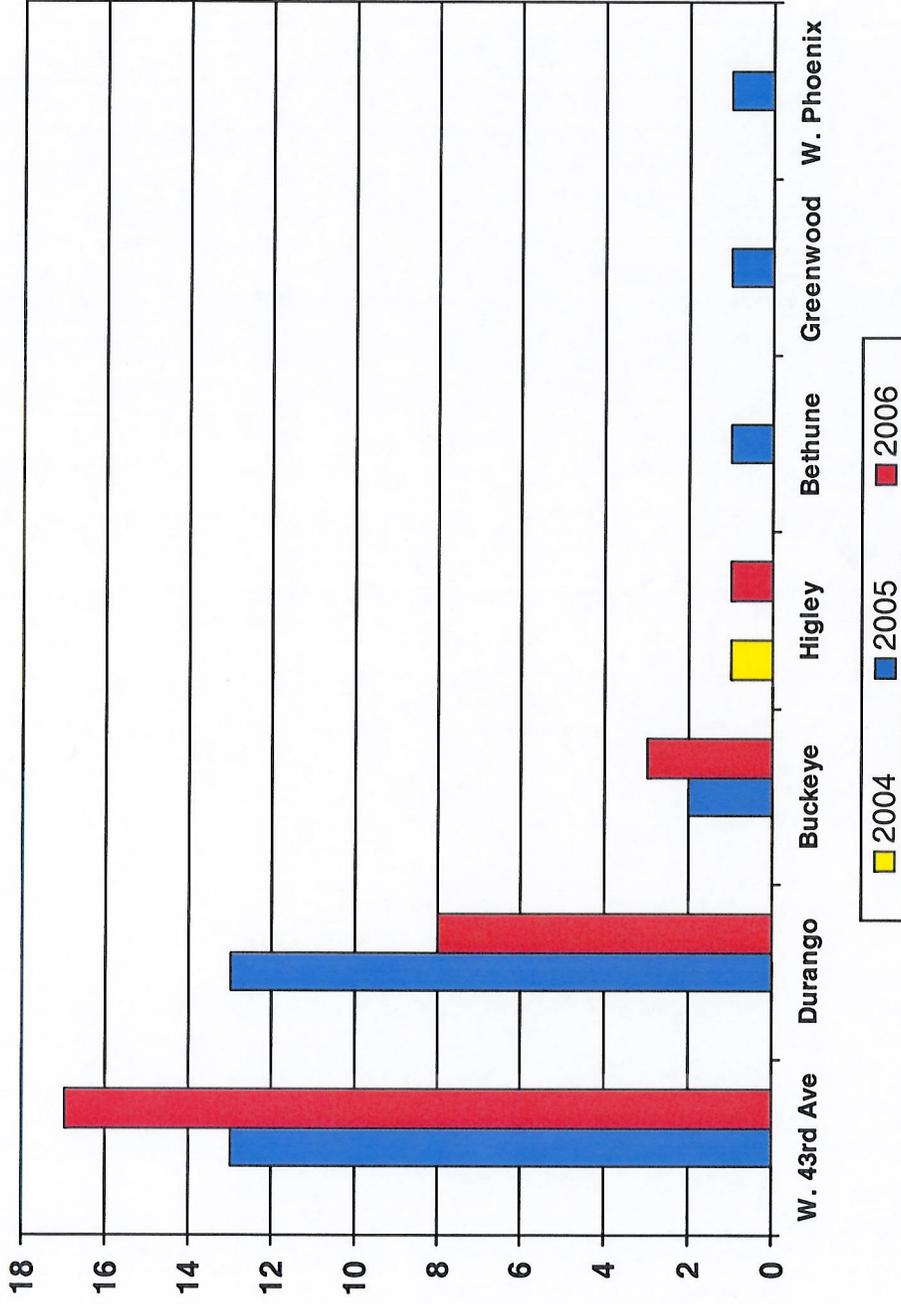
The MAG PM-10 Source Attribution and Deposition Study was another major study which provided information for the evaluation of control measures. The study was designed to identify the sources of emissions contributing to violations of the PM-10 standard at monitors in the nonattainment area during stagnant conditions and characterize the deposition of PM-10 particles emitted by these sources. The MAG consultants for the study were T&B Systems and Sierra Research. The key questions addressed in the study were:

1. Where are the specific source areas and/or sources in the Salt River region that contribute to the particulate matter (PM) loading at the Durango Complex and West 43<sup>rd</sup> monitoring sites?
2. To obtain useful results from models such as AERMOD, can the regional particle size distribution be characterized on an area basis (i.e., is there an area of uniformity that can be generalized?)
3. What are the causes of heavy PM loading during the morning hours at the Durango and West 43<sup>rd</sup> monitors? Are the diurnal variations of PM-10 and peaks due to reentrainment of paved road dust, or due to other activities in the surrounding areas that are coincident with traffic peaks?

The approach used for the study involved assessing existing meteorological and PM data; selecting monitoring tools; establishing a sampling plan; defining routes for mobile sampling; determining locations of meteorological data collection; selecting locations to investigate dispersion of roadway sources; conducting sampling in two phases;

FIGURE ES-2

EXCEEDANCES OF THE 24-HOUR PM-10 STANDARD AT MONITORS IN MARICOPA COUNTY



- Notes: 1. Exceedances are based on data from the EPA Air Quality System (AQS). Exceedances due to natural events have been removed from the AQS by EPA.  
 2. The exceedance at the Bethune, Greenwood, and W. Phoenix monitors occurred on 12/12/05.

coordinating with local agencies for related data; and performing daily review of collected data to identify insights, opportunities and problems. The monitoring tools for the study included: a particle lidar; mobile monitoring; DustTrak optical PM-10 monitors; DustTrak optical PM-2.5 monitors; an aerodynamic particle size analyzer; MiniVol filter based samplers; a sodar; and a SCAMPER vehicle. The SCAMPER (System for Continuous Aerosol Monitoring of Particulate Emissions from Roadways) vehicle was used to measure PM-10 from paved roads. From November 15, 2006 through December 14, 2006, extensive measurements were taken in the Salt River area using state-of-the-art technologies.

In general, the study identified a number of sources of PM-10 in the Salt River area. They included: trackout; dragout from unpaved or poorly maintained paved roads or parking lots; unpaved shoulders; unpaved roads; open burning; agriculture; and vehicle activity on unpaved parking areas and vacant lots. Preliminary results from the study were used in the evaluation of control measures and the final results were used in the modeling attainment demonstration.

Based upon the Maricopa County Air Quality Department 2005 Periodic Emissions Inventory for PM-10 for the Maricopa County Nonattainment Area, the primary sources of PM-10 are: Paved Roads (including trackout) 16 percent; Construction (residential) 14 percent; Construction (commercial) 13 percent; Unpaved Roads 10 percent; Construction (road) 9 percent; Fuel Combustion and Fires (industrial natural gas and fuel oil, commercial/institutional natural gas and fuel oil, and residential natural gas, wood and fuel oil) 7 percent; and Windblown Vacant (vacant lots) 7 percent. The sources are depicted in Figure ES-3.

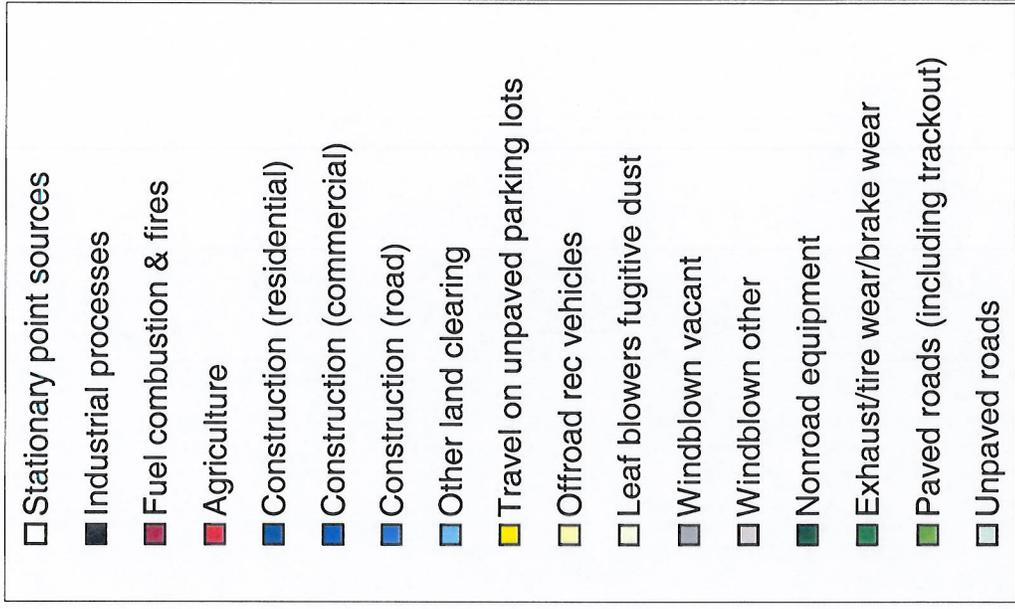
The emissions in the 2005 Periodic Emissions Inventory for PM-10 were projected to 2007, 2008, 2009, and 2010. The total controlled emissions of 97,436 tons in the 2007 projected inventory were used to calculate the five percent reduction target in emissions (see Figure ES-4). This number was multiplied by five percent to determine the PM-10 emissions reduction target of 4,872 tons per year. To meet this annual target, the 2008 emissions with committed control measures must be at least 4,872 tons less than the base case 2008 emissions; the controlled 2009 emissions must be at least 9,744 tons less than the 2009 base case emissions; and the controlled 2010 emissions must be at least 14,616 tons less than the 2010 base case emissions.

In order to reduce PM-10, a broad range of commitments to implement measures were received from the State, Maricopa County, and the twenty-three local governments in the PM-10 nonattainment area. Collectively, the MAG 2007 Five Percent Plan for PM-10 includes fifty-three committed measures.

The key committed measures that were quantified as control measures include: Dust Managers/Coordinators at Earthmoving Sites; Increase Rule 310 and 316 Inspections; Extensive Dust Control Training; Conduct Nighttime and Weekend Inspections; Strengthen Rule 310 to Promote Continuous Compliance; Pave or Stabilize Dirt Shoulders; Pave or

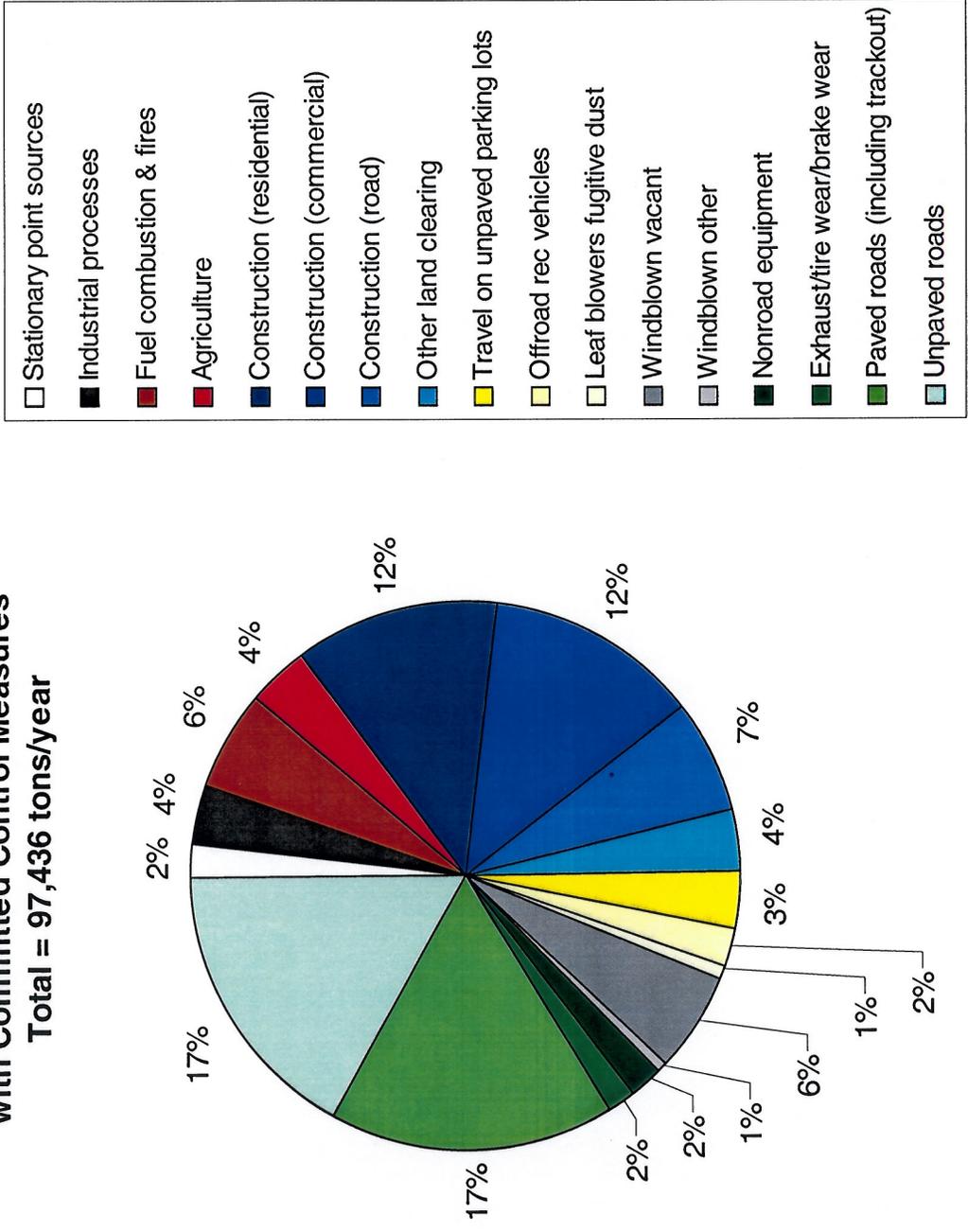
FIGURE ES-3

**2005 PM-10 Emissions  
in the PM-10 Nonattainment Area  
Total = 84,753 tons/year**



Source: 2005 Periodic Emissions Inventory for the Maricopa County, Arizona Nonattainment Area. Maricopa County Air Quality Department. May 2007.

**Figure ES-4**  
**2007 PM-10 Emissions**  
**with Committed Control Measures**  
**Total = 97,436 tons/year**



Stabilize Unpaved Parking Lots; Restrict Vehicle Use on Vacant Lots; Strengthen Rule 310.01 for Vacant Lots; and Recover the Cost of Stabilizing Vacant Lots.

The committed control measures were quantified in order to model attainment and meet the five percent reduction targets. The PM-10 emissions reductions for the committed control measures are shown in Figure ES-5.

With the implementation of the committed control measures, the total PM-10 emissions in 2010 are 82,829 tons (See Figure ES-6), which represents a 19.3 percent reduction in the 2010 base case emissions. These reductions are necessary to model attainment of the PM-10 standard at all monitors as expeditiously as practicable, which is 2010. The total reductions due to the committed control measures also exceed the annual five percent reduction targets in 2008, 2009 and 2010, as indicated in Table ES-1.

In accordance with the Clean Air Act, the MAG 2007 Five Percent Plan for PM-10 also contains contingency measures. The contingency measures are committed measures in the adopted plan which achieve emissions reductions beyond those measures relied upon to model attainment of the standard and demonstrate progress toward attainment (i.e., five percent reductions, reasonable further progress, and milestones).

The key committed measures in the Five Percent Plan that were quantified as contingency measures are: Pave or Stabilize Dirt Roads and Alleys; Sweep with PM-10 Certified Street Sweepers; Reduce Trackout Onto Paved Roads; Additional Five Million Dollars in FY 2007 MAG Federal Funds for Paving Dirt Roads and Shoulders; Agricultural Best Management Practices; 15 Mile Per Hour Speed Limits on Dirt Roads; Reduce Offroad Vehicle Use; Certification for Dust Free Developments; and Public Education and Outreach Program.

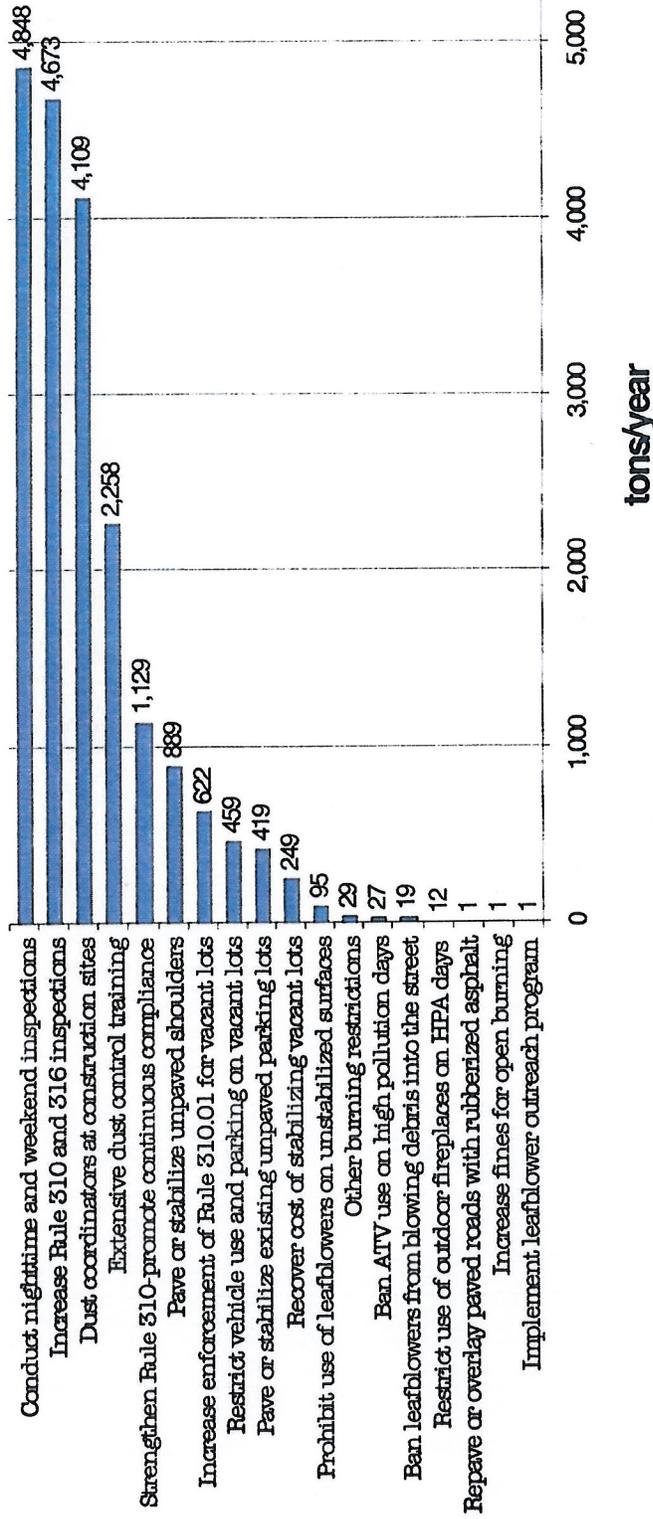
EPA guidance indicates that contingency measures should provide emissions reductions equivalent to one year of reasonable further progress. The reasonable further progress requirements for Serious PM-10 nonattainment areas are included in Section 189(c) of the Clean Air Act. For the Five Percent Plan, one year of reasonable further progress is equivalent to a reduction in PM-10 emissions of 4,869 tons.

Figure ES-7 shows the impacts of the individual contingency measures in 2010. Collectively, the contingency measures reduce PM-10 emissions by 5,223 tons in 2008, 7,213 tons in 2009, and 9,159 tons in 2010 versus the contingency target of 4,869 tons per year, as shown in Table ES-1.

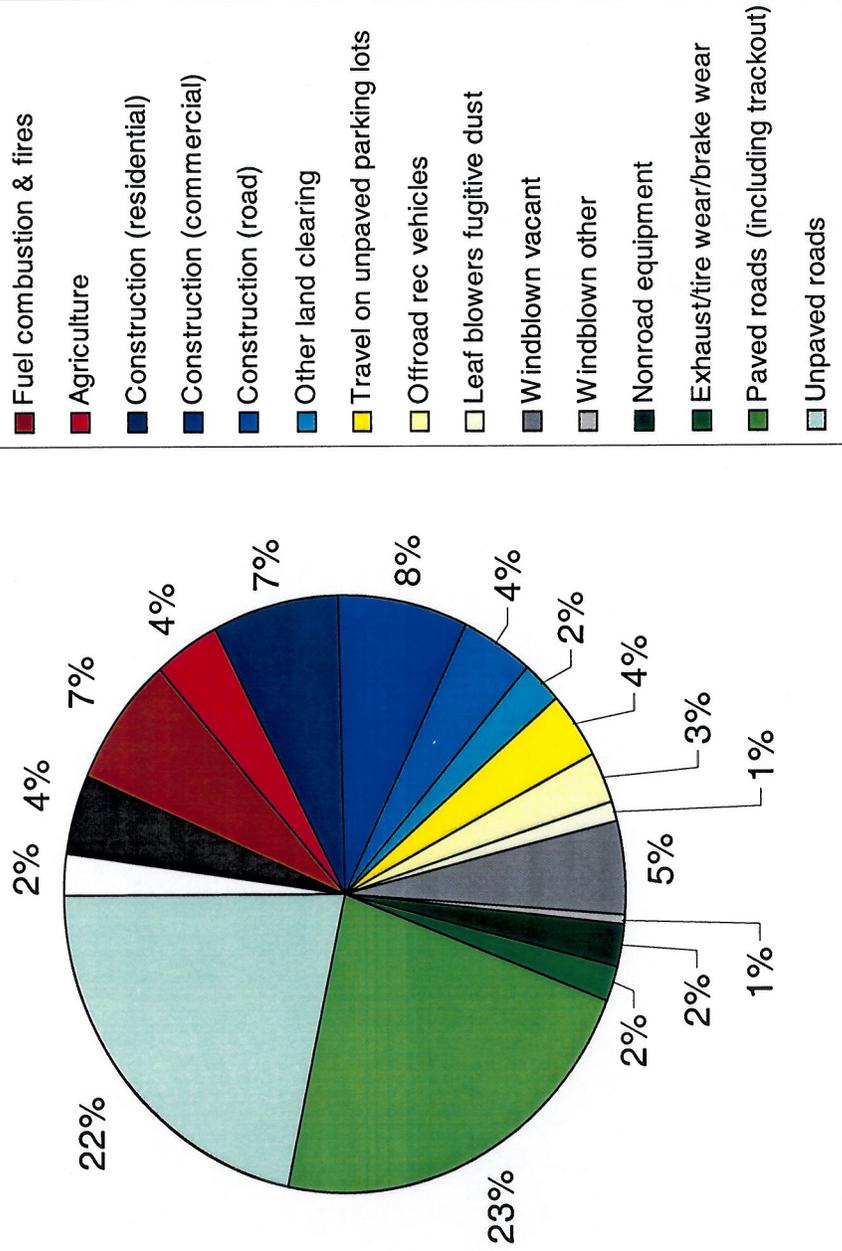
The total 2010 PM-10 emissions with committed control measures and committed contingency measures are 73,670 tons (see Figure ES-8). Together, these measures reduce base case PM-10 emissions by 28.2 percent in 2010.

For conformity analyses, the onroad mobile source emissions budget includes reentrained dust from travel on paved roads; vehicular exhaust, tire wear, and brake wear; travel on unpaved roads; and road construction. In 2010, the PM-10 emissions from these four source categories total 103.3 metric tons per day. This represents the onroad mobile source emissions budget for conformity.

**Figure ES-5**  
**Reductions in 2010 for Committed Control Measures**  
**in the Five Percent Plan for PM-10**



**Figure ES-6**  
**2010 PM-10 Emissions**  
**with Committed Control Measures**  
**Total = 82,829 tons/year**  
**(19.3% reduction)**



**TABLE ES-1**

**EMISSIONS REDUCTIONS FOR COMMITTED CONTROL MEASURES QUANTIFIED TO MODEL ATTAINMENT AND MEET THE FIVE PERCENT REDUCTION REQUIREMENT**

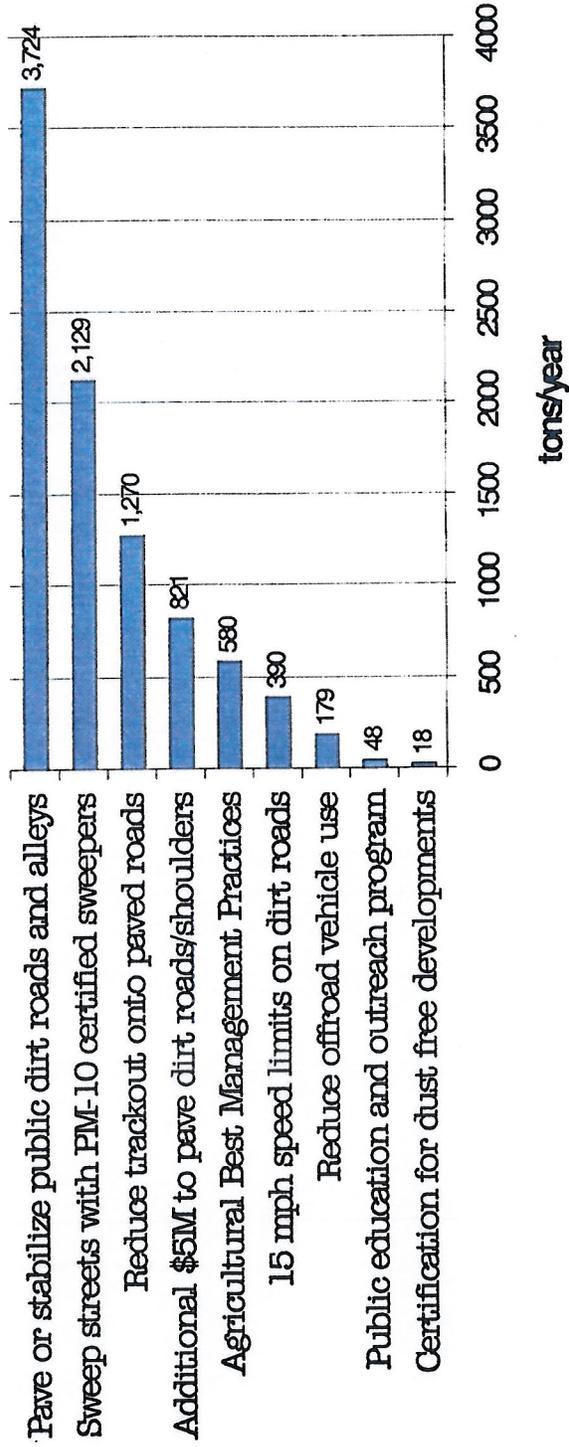
- 6,605 tons vs. five percent reduction target of 4,872 tons in 2008
- 15,423 tons vs. five percent reduction target of 9,744 tons in 2009
- 19,840 tons vs. five percent reduction target of 14,616 tons in 2010

**EMISSIONS REDUCTIONS FOR COMMITTED CONTINGENCY MEASURES QUANTIFIED TO MEET THE CONTINGENCY MEASURE REQUIREMENT**

- 5,223 tons vs. contingency reduction target of 4,869 tons in 2008
- 7,213 tons vs. contingency reduction target of 4,869 tons in 2009
- 9,159 tons vs. contingency reduction target of 4,869 tons in 2010

**Figure ES-7**

**Reductions in 2010 for Contingency Measures  
in the Five Percent Plan for PM-10**



**Figure ES-8**  
**2010 PM-10 Emissions**  
**with Committed Control and Contingency Measures**  
**Total = 73,670 tons/year**  
**(28.2% reduction)**

