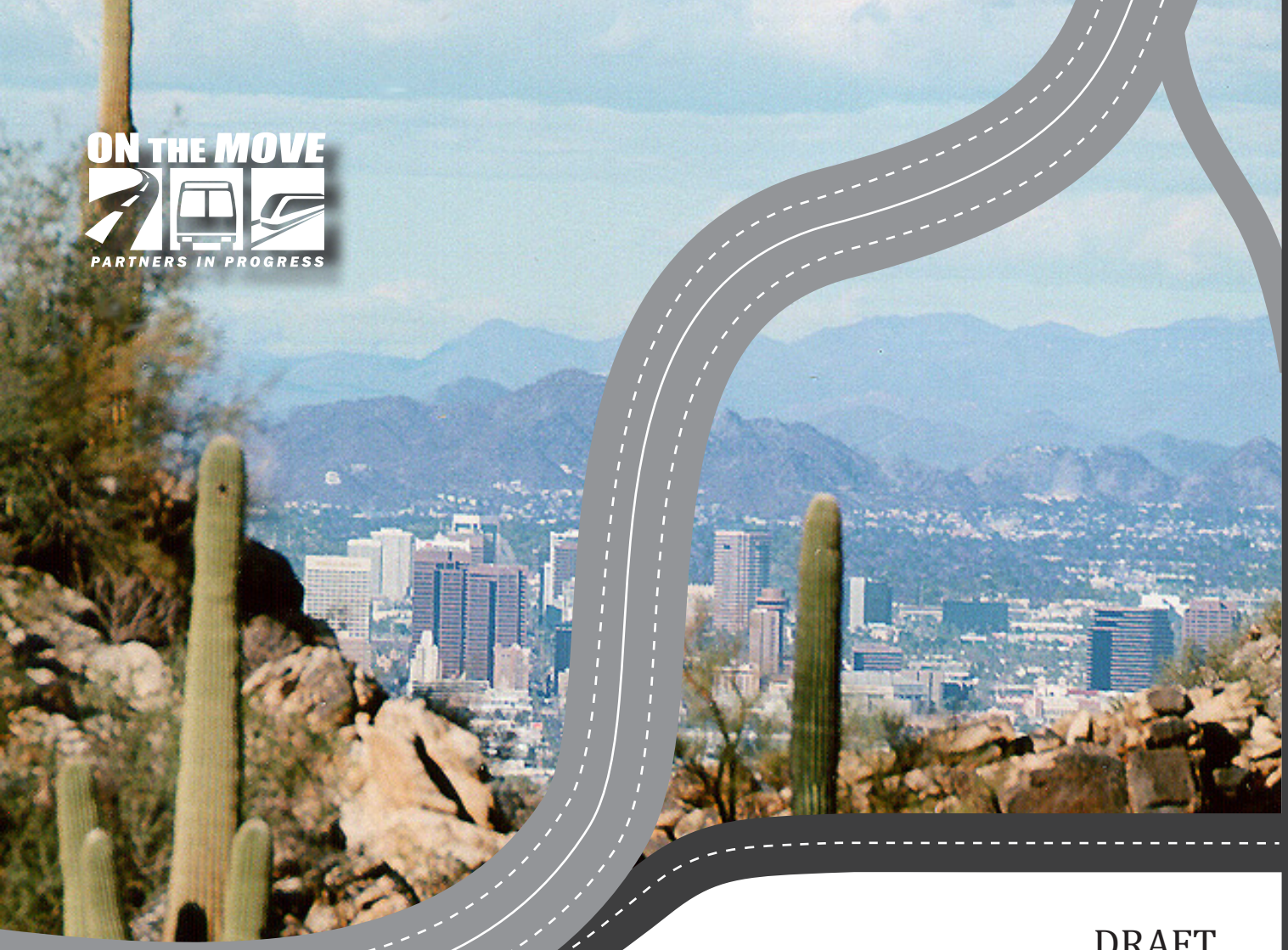

DRAFT

CONFORMITY ANALYSIS

FOR THE FY 2014-2018 TRANSPORTATION IMPROVEMENT PROGRAM AND THE 2035 REGIONAL TRANSPORTATION PLAN

Appendices Volume 2

OCTOBER 2013

REGIONAL TRANSPORTATION PLAN

MARICOPA ASSOCIATION of GOVERNMENTS

DRAFT 2014 MAG CONFORMITY ANALYSIS

FOR THE

FY 2014-2018 MAG TRANSPORTATION IMPROVEMENT PROGRAM

AND THE

2035 REGIONAL TRANSPORTATION PLAN

APPENDICES, VOLUME 2

October 2013

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LIST OF APPENDICES

Volume 1:

A. Federal Actions and Correspondence Regarding the Maricopa County Nonattainment and Maintenance Areas

B. Consultation Correspondence

C. Air Quality Modeling Vehicle Miles of Travel

D. MAG 1987 Carbon Monoxide Plan Excerpts Regarding Control Measure Commitments and Schedules

E. MAG 1993 Carbon Monoxide Plan Excerpts Regarding Control Measure Commitments and Schedules

F. MAG 1993 Carbon Monoxide Plan Addendum Excerpts Regarding Control Measure Commitments and Schedules

G. Revised MAG 1999 Serious Area Carbon Monoxide Plan Excerpts Regarding Control Measure Commitments and Schedules

H. MAG 1978 Ozone Plan Excerpts Regarding Control Measure Commitments and Schedules

I. MAG 1987 Ozone Plan Excerpts Regarding Control Measure Commitments and Schedules

J. MAG 1993 Ozone Plan Excerpts Regarding Control Measure Commitments and Schedules

K. MAG 1993 Ozone Plan Addendum Excerpts Regarding Control Measure Commitments and Schedules

Volume 2:

L. MAG 2012 Five Percent Plan for PM-10 Excerpts Regarding Control Measures

M. Revised MAG 1999 Serious Area Particulate Plan Excerpts Regarding Control Measure Commitments and Schedules

N. MAG 1988 Particulate Plan for PM-10 Excerpts Regarding Control Measure Commitments and Schedules

O. MAG 1991 Particulate Plan for PM-10 with 1993 Revisions Excerpts Regarding Control Measure Commitments and Schedules

P. Example MOVES2010b Input Files

Q. Trip Reduction Program Summaries

R. Public Hearing Process Documentation

S. Response To Comments

APPENDIX L

MAG 2012 FIVE PERCENT PLAN FOR PM-10 EXCERPTS
REGARDING CONTROL MEASURES

List of Exhibits:

1. MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Four: The Adopted Plan and Implementation Schedule for the MAG 2012 Five Percent Plan for PM-10.

2. MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Six: Table 6-22. 2008-2012 PM-10 Reductions to Meet Contingency Requirements.

APPENDIX L, Exhibit 1:

MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Four: The Adopted Plan and Implementation Schedule for the MAG 2012 Five Percent Plan for PM-10.

MAG 2012 FIVE PERCENT PLAN FOR PM-10 FOR THE MARICOPA COUNTY NONATTAINMENT AREA

Prepared by:

May 2012

Technical Assistance Provided By:

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

CHAPTER FOUR

THE ADOPTED PLAN AND IMPLEMENTATION SCHEDULE FOR THE MAG 2012 FIVE PERCENT PLAN FOR PM-10

The new MAG 2012 Five Percent Plan for PM-10 contains a wide variety of existing control measures and projects that have been implemented to reduce PM-10 and a new measure designed to reduce PM-10 during high risk conditions, including high winds. While the 2007 Five Percent Plan was withdrawn, a wide range of control measures in that plan continue to be implemented to reduce PM-10 and are being resubmitted. Table 4-1 includes the Arizona Statutes, Maricopa County Rules, a Maricopa County Ordinance, and Appendices for the resubmitted measures and a new high risk measure to be approved into the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area. The Arizona Revised Statutes listed in Table 4-1 are included in Appendix C, Exhibit 1. The 2012 Five Percent Plan also includes contingency measures that were implemented early such as PM-10 certified street sweeping on freeways and arterials, as well as the projects completed in 2008-2011 that paved and stabilized unpaved roads, alleys and shoulders; reduced speed limits; and overlaid highways with rubberized asphalt.

As described in Table 4-1, the Arizona Statutes, Maricopa County Rules, and Maricopa County Ordinance include requirements to reduce PM-10 emissions from a broad range of sources. The requirements apply to unpaved roads and shoulders, leaf blowers, unpaved parking lots, vacant lots, sweeping streets with certified sweepers, off-road vehicle use, open and recreational burning, residential woodburning, covered vehicle loads, dust generating operations, nonmetallic mineral processing, and other unpermitted sources.

It is also important to note that the Environmental Protection Agency (EPA) has approved Maricopa County Rules 310 and 310.01 in 2010 and Rule 316 in 2009, as part of the State Implementation Plan. Compliance with these rules has increased every year since 2007. These Maricopa County rules reduce emissions from a wide variety of sources and apply to the Maricopa County area. Maricopa County Rule 310 (Fugitive Dust from Dust-Generating Operations) regulates fugitive dust emissions from sources and activities such as: land clearing, earthmoving, weed abatement, excavating, construction, demolition, bulk material handling, storage and transporting operations, outdoor equipment, motorized machinery, staging areas, parking areas, material storage areas, haul roads, disturbed surface areas, initial landscapes and trackout onto paved surfaces from these sources.

Maricopa County Rule 310.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust) regulates fugitive dust emissions from sources and activities such as: vehicle use in open areas and vacant lots, open areas, vacant lots, unpaved parking lots, unpaved roadways (including alleyways), easements, rights-of-way, access roads and trackout onto paved surfaces from these activities.

Table 4-1
Arizona Statutes, Maricopa County Rules, Maricopa County Ordinance, and Appendices to be Approved into the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area

Arizona Revised Statutes (A.R.S.)	Description	Effective Dates
A.R.S. § 9-500.04. Only A.3., A.5., A.6., A.7., A.8., A.9. and H.	Air quality control; definitions [city and town requirements in Area A regarding targeting unpaved roads and shoulders; leaf blower restrictions; restrictions related to parking, maneuvering, ingress and egress areas and vacant lots; requirement for certified street sweepers]	9/19/07
A.R.S. § 9-500.27.	Off-road vehicle ordinance; applicability; violation; classification	9/19/07
A.R.S. § 11-871. Only A., B. and D.4.	Emissions control; no burn; exemptions; penalty [no burn restriction for any HPA day, increased civil penalty]	9/19/07
A.R.S. § 11-877.	Air quality control measures [county leaf blower restrictions]	9/19/07
A.R.S. § 28-1098. Only A. and C.1.	Vehicle loads; restrictions; civil penalties [for safety or air pollution prevention purpose]	9/19/07
A.R.S. § 49-424. Only 11.	Duties of department [develop and disseminate air quality dust forecasts for the Maricopa County PM-10 nonattainment area]	7/20/11
A.R.S. § 49-457.01.	Leaf blower use restrictions and training; leaf blower equipment sellers; informational material; outreach; applicability	9/19/07
A.R.S. § 49-457.03.	Off-road vehicles; pollution advisory days; applicability; penalties	9/19/07
A.R.S. § 49-457.04.	Off-highway vehicle and all-terrain vehicle dealers; informational material; outreach; applicability	9/19/07
A.R.S. § 49-457.05. Only A., B., C., D. and I.	Dust action general permit; best management practices; applicability; definitions	7/20/11
A.R.S. § 49-474.01. Only A.4., A.5., A.6., A.7., A.8., A.11., B. and H.	Additional board duties in vehicle emissions control areas; definitions [county requirements for stabilization of targeted unpaved roads, alleys and shoulders; restrictions related to parking, maneuvering, ingress and egress areas and vacant lots; requirement for certified street sweepers]	9/19/07
A.R.S. § 49-474.05.	Dust control; training; site coordinators	9/19/07
A.R.S. § 49-474.06.	Dust control; subcontractor registration; fee	9/19/07
A.R.S. § 49-501. Only A.2., B.1., C., F. and G.	Unlawful open burning; exceptions; civil penalty; definitions [ban on outdoor fires from May 1 to September 30; deletion of recreational purpose exemption; no burn day restrictions; penalty provision]	9/19/07
A.R.S. § 49-541. Only 1.	Definitions [Area A]	8/9/01

Table 4-1 Continued

Maricopa County Air Quality Department Rules	Description	Effective Dates
310	Fugitive Dust from Dust-Generating Operations Adopted 1/27/10 and submitted to EPA 4/12/10 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
310.01	Fugitive Dust From Non-Traditional Sources of Fugitive Dust Adopted 1/27/10 and submitted to EPA 4/12/10 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
314	Open Outdoor Fires and Indoor Fireplaces at Commercial and Institutional Establishments Adopted 3/12/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 74 FR 57612; 11/9/09]	EPA approved effective 1/8/10
316	Nonmetallic Mineral Processing Adopted 3/12/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 74 FR 58553; 11/13/09]	EPA approved effective 1/8/10
Appendix C	Fugitive Dust Test Methods Adopted 3/26/08 and submitted to EPA 7/10/08 [Notice of Final Rulemaking 75 FR 78167; 12/15/10]	EPA approved effective 1/14/11
Maricopa County Ordinance	Description	Effective Dates
P-26	Residential Woodburning Restriction Adopted 3/26/08 and submitted to EPA 7/10/08; [Notice of Final Rulemaking 74 FR 57612; 11/9/09]	EPA approved effective 1/8/10
Appendices	Description	Effective Dates
Appendix C, Exhibit 1	Arizona Revised Statutes Listed in Table 4-1	
Appendix C, Exhibit 2	Maricopa County Resolution to Evaluate Measures in the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area	11/16/11
Appendix C, Exhibit 3	Arizona Department of Environmental Quality Dust Action General Permit	12/30/11
Appendix C, Exhibit 4	Arizona Department of Environmental Quality Commitment to Revise the MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area if Necessary for the Emerging and Voluntary Measure	

APPENDIX L, Exhibit 2:

MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Six: Table 6-22. 2008-2012 PM-10 Reductions to Meet Contingency Requirements.

Table 6-22
2008-2012 PM-10 Reductions to Meet Contingency Requirements

Completed Projects	Implementing Entities	2008	2009	2010	2011	2012
		(tons/year)				
Sweep streets with PM-10 certified sweepers Contracted sweeping of freeways, ramps and frontage roads - 100% compliant, effective 2/20/10 25 PM-10 certified sweepers purchased with CMAQ funds: 1/1/07-12/31/09	ADOT	0	0	294	342	344
	Cities, towns	59	116	153	154	155
	Total for Street Sweeping	**59**	**116**	**447**	**495**	**499**
Pave or stabilize existing public dirt roads and alleys Paving/stabilization projects completed in 2008-2011	Cities, towns, Maricopa and Pinal County, and Gila River Indian Community	461	1,352	2,124	2,662	2,625
	Total for Road/Alley Paving/Stabilization	**461**	**1,352**	**2,124**	**2,662**	**2,625**
Lower speed limits on dirt roads and alleys Speed limits lowered in 2008-2011	Cities, towns, Maricopa County	4	78	161	161	161
	Total for Lower Speed Limits	**4**	**78**	**161**	**161**	**161**
Pave or stabilize unpaved shoulders Paving/stabilization projects completed in 2008-2011	Cities, towns, Maricopa County	173	242	265	293	150
	Total for Shoulder Paving/Stabilizing	**173**	**242**	**265**	**293**	**150**
Repave or overlay paved roads with rubberized asphalt Rubberized asphalt overlays completed in 2008-2011	ADOT	0	3	3	3	3
	Total for Overlays	**0**	**3**	**3**	**3**	**3**
	Total for Completed Projects	**697**	**1,790**	**2,999**	**3,614**	**3,439**

APPENDIX M

REVISED MAG 1999 SERIOUS AREA PARTICULATE PLAN FOR PM-10 EXCERPTS REGARDING CONTROL MEASURE COMMITMENTS AND SCHEDULES

List of Exhibits:

1. Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Seven: The Adopted Plan and Implementation Schedule for the Revised MAG 1999 Serious Area Particulate Plan for PM-10.

2. Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter V of Technical Support Document (TSD): Evaluation of Committed Control Measures.

APPENDIX M, Exhibit 1:

Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter Seven: The Adopted Plan and Implementation Schedule for the Revised MAG 1999 Serious Area Particulate Plan for PM.

CHAPTER SEVEN

THE ADOPTED PLAN AND IMPLEMENTATION SCHEDULE FOR THE REVISED MAG 1999 SERIOUS AREA PARTICULATE PLAN FOR PM-10

This Chapter discusses the Adopt Plan, Implementation Schedule and is part of the process used to determine Best Available Control Measures. During the process of developing this plan, the State and local governments reviewed the measures from the Suggested List which were under their respective authorities. The Suggested List included both particulate and carbon monoxide control measures since Serious Area plans for both pollutants were being prepared in close proximity. In addition, several of the measures impact both pollutants. Each entity then determined which measures were technologically and economically feasible for implementation by that entity.

Formal resolutions with commitments to implement particulate and carbon monoxide pollution control measures were received from the local governments, Maricopa County, Arizona Department of Transportation, and Regional Public Transportation Authority. The resolutions noted that Best Available Control Measures are required to be included in the Serious Area Particulate Plan for PM-10.

These resolutions were reviewed in order to determine which measures received firm commitments for inclusion in the MAG 1999 Particulate Plan for PM-10. According to the Arizona Department of Environmental Quality (ADEQ), the criteria for a firm commitment include: measures with the implementation, funding, and time frame specified; ongoing programs; commitments to implement measures without a specific funding source identified; commitments to draft documents; and commitments to conduct feasibility studies. Jurisdictional support for a measure is not a firm commitment unless the jurisdiction also agrees to enforce the measure. Measures were also analyzed by MAG to determine which measures could be used for numeric credit towards attainment (see Chapter Eight, Demonstration of Attainment Status).

At the state level, the Arizona Legislature passed legislation for several air quality measures in 1996, 1997 and 1998. Since legislation constitutes a firm commitment, these measures were also included in the adopted plan. The primary pieces of legislation included Senate Bill 1002 passed in a 1996 Special Session; House Bills 2237 and 2307 passed during the 1997 Regular Session; Senate Bills 1427 and 1269 and House Bill 2347 passed during the 1998 Regular Session; House Bill 2001 passed in a December 1998 Special Session, and House Bill 2254 passed during the 1999 Regular Session.

Collectively, a broad range of commitments were received from the State and local governments for the measures in the adopted plan. These extensive commitments demonstrate the level of effort that is being made to improve air quality. Many of these measures impact all three pollutants: particulates, carbon monoxide, and ozone. In the determination of attainment status, specific emissions reduction credits were not taken where the basis for estimating air quality benefits was limited. However, in many cases

these commitments will produce emission reductions above and beyond what has been quantified in the evaluation of attainment status. These measures represent additional efforts by the State and local jurisdictions to reduce emissions and improve air quality. It is anticipated that as additional experience is gained in the implementation of these measures over time, a more detailed assessment of their air quality benefits can be developed and reported.

The resolutions from the respective entities and the State legislation are included in Chapter Twelve and the corresponding commitment documents which accompany this plan.

The effective implementation of the measures in the adopted plan is an important element in expeditious air quality improvement. Based upon the Clean Air Act, the PM-10 attainment date for Serious Areas is December 31, 2001. If an extension of the attainment date is granted, the attainment date would be no later than December 31, 2006. Effective and expeditious implementation enhances the achievement of the standard by the attainment date and the continued maintenance of that standard.

COMMITTED MEASURES AND IMPLEMENTATION SCHEDULES

Based upon the commitments made by the State and local jurisdictions, the following describes the measures in the adopted plan and their schedule for implementation. The commitments involve the implementation of New Measures; Existing Measures Which Are Being Strengthened; and Additional Commitments for Measures Not on the Suggested List (see Table 7-1). The year in which the commitment was made is reflected in the left margin.

PART 1: NEW MEASURES

1. Phased -In Emission Test Cutpoints

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which contains an appropriation of $120,000 from the State General Fund to the Arizona Department of Environmental Quality to develop and implement an alternative test protocol to reduce the false failure rates associated with the more stringent pass-fail standards for the Vehicle Emissions Testing Program (Section 19 of H.B. 2237).

TABLE 7-1

SERIOUS AREA PARTICULATE PLAN FOR PM-10
COMMITTED MEASURES

PART 1: NEW MEASURES

TABLE 7-1

SERIOUS AREA PARTICULATE PLAN FOR PM-10
COMMITTED MEASURES(Continued)

PART 2: EXISTING MEASURES WHICH ARE BEING STRENGTHENED

TABLE 7-1

SERIOUS AREA PARTICULATE PLAN FOR PM-10
COMMITTED MEASURES(Continued)

PART 3: ADDITIONAL COMMITMENTS FOR MEASURES NOT ON THE SUGGESTED LIST

1998 In 1998, the Arizona Legislature passed S.B. 1427 which requires that vehicles in Area A and B be emissions tested. The vehicles subject to the Vehicle Emissions Inspection Program that have been included within the new boundaries of Area A are required to comply beginning from and after December 31, 1998. The newest five model year vehicles are exempted from the Vehicle Emissions Inspection Program on a rolling basis. Owners of these vehicles are required to pay an in lieu fee equivalent to the price of the test unless they choose to take and pay for an emissions test. The in lieu fees will be deposited into the Arizona Clean Air Fund. S.B. 1427 also allows the Vehicle Emissions Inspection contract to be extended for three additional years (A.R.S. 49-542, 49-543, 49-545 and Section 41 of S.B. 1427).

In addition, the Arizona Department of Environmental Quality will be implementing Interim Test Cutpoints for the Vehicle Emissions Inspection Program until issues are resolved with the final test cutpoints for the I/M 240 Program. The Interim Cutpoints were selected in an attempt to achieve the following failure rates in all three vehicle class categories (Light Duty Gasoline Vehicles, Light Duty Gasoline Trucks 1, and Light Duty Gasoline Trucks 2: 50 percent for Model Years 1981-85; 25 percent for 1986 to 1989 model years, and 10 percent for Model Years 1990-93).

1998 The Arizona Legislature, in a December 1998 Special Session, passed H.B. 2001 which extended the duration of the Vehicle Emissions Inspection Program from January 1, 1999 to December 31, 2001. The bill included a statement of intent that the Legislature intends to ensure a cost-effective Vehicles Emissions Inspection Program which meets the objectives of ensuring clean air while not unduly burdening vehicle owners. Accomplishing the air quality goals will include implementation of the final cutpoints for the transient loaded emissions test (Section 1 and Section 7 of H.B. 2001 and Section 5. Laws 1989, Chapter 225, Section 10, as amended by Laws 1991, Chapter 8, Section 11 as amended with Section 10. Delayed Repeal).

To improve the effectiveness of the program, H.B. 2001 also established a Vehicle Emissions Inspection Legislative Study Committee composed of five members of the Arizona House of Representatives and five members of the Arizona Senate. The role of the Committee is to review and make recommendations regarding the following issues on or before December 15, 1999:

1. The amount of pollution that is above the allowable standard and that is emitted by vehicles that receive waivers.

2. The actual net reduction of pollution by vehicles that fail the Vehicle Emissions Inspection and then subsequently pass the Vehicle Emissions Inspection.
3. Assistance to owners of motor vehicles that receive a one-time waiver and that subsequently cannot be registered.
4. The decentralization of the Vehicle Emissions Inspection Program.
5. The fostering of a competitive market for the Vehicle Emissions Inspection Program.
6. The requirement that a motor vehicle pass an emissions inspection test before it is registered.
7. The cost benefit relationship of the Vehicle Emissions Inspection Program.
8. A comparison of low Vehicle Emissions Inspection Program are operated in other jurisdictions and in this state.
9. The cost benefit relationship of all programs funded by the Vehicle Emissions Inspection Testing and Administrative Fee.
10. The use of vehicle emissions inspection stations throughout Maricopa County and Pima County by day, week and month and methods to even-out demand at vehicle emissions inspection stations to continue reasonable wait times.
11. The need for additional vehicle emissions inspection stations.
12. The funding requirements of the Vehicle Inspection Program through December 31, 2001.
13. The effectiveness of the Vehicle Emissions Inspection Program in reducing air pollution.
14. Any other issues related to the Vehicle Emissions Inspection Program that the Committee deems appropriate (Section 6 of H.B. 2001).

1999

In 1999, the Arizona Legislature passed H.B. 2254 which changes the statutory repeal of the Vehicle Emissions Inspection Program to a sunset provision. According to A.R.S. 41-3009.01, the Vehicle Emissions Inspection Program terminates on January 1, 2009 and Title 49, Chapter 3, Article 5 is repealed on July 1, 2009 (A.R.S. 41-3009.01).

Regarding the emissions inspection agreement with an independent contractor, the following applies for any contract that takes effect beginning on or after January 1, 2002:

1. The Arizona Department of Environmental Quality is required to report at the end of each calendar quarter to the Joint Legislative Budget Committee on the status of the contract process, discussions, development of the request for proposal, contract negotiations, and any other information as may be requested.

2. The contract terms are subject to prior review by the Joint Legislative Budget Committee before placement of any advertisement relating to requests for proposal.

3. Any proposed modification or amendment to the contract is subject to prior review by the Joint Legislative Budget Committee (A.R.S. 49-545 H.).

H.B. 2254 also requires each vehicle that is owned by the United States government and that is domiciled in this state for more than ninety consecutive days and each vehicle owned by a state or political subdivision of this state to comply with A.R.S. 49-542. On compliance, the Arizona Department of Environmental Quality will issue a government entity compliance sticker for the vehicle. The government entity compliance sticker will be placed on the vehicle as prescribed by rules adopted by the Department (A.R.S. 49-557).

If the vehicle does not have a current government entity compliance sticker, a law enforcement officer will issue a citation to the vehicle operator for a violation. On receipt of the abstract of conviction for a violation, the Arizona Department of Transportation will immediately suspend the privilege to operate the vehicle on the highways of the state until the vehicle complies with A.R.S. 49-542.

Collectively, the provisions in H.B. 2254 that apply to the Phased-In Emission Test Cutpoints include A.R.S. 41-3009.01, 49-545 H., 49-557, and Section 7 of H.B. 2254.

2. Enhanced Emission Testing of Constant Four-Wheel Drive Vehicles

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires motor vehicles, including constant four-wheel drive vehicles, manufactured in or after Model Year 1981, with a gross vehicle weight rating of 8,500 pounds or less, other than diesel powered vehicles, to take and pass a transient load emissions test (I/M 240). Previously, constant four-wheel drive vehicles were required to pass a curb idle emissions test (A.R.S. 49-542).

1999 In 1999, the Arizona Legislature passed H.B. 2254 which requires the Director of the Arizona Department of Environmental Quality to administer a biennial emissions inspection program that requires the inspection of constant four-wheel drive vehicles manufactured in or after Model Year 1981 with a gross vehicle weight rating of 8,500 pounds or less, other than diesel vehicles. These vehicles will be required to take and pass a transient loaded emissions test. The Director will adopt minimum emissions standards and rules for the program (A.R.S. 49-541.01 A.).

These provisions of A.R.S. 49-541.01 A. apply to vehicles owned by a person who is subject to A.R.S. 15-1444 or A.R.S. 15-1627 and for those vehicles registered outside of the area defined in A.R.S. 49-541.01 C. but used to commute to the driver's principal place of employment located within the area defined in A.R.S. 49-541.01 C.

The program will be effective in the following areas (A.R.S. 49-541.01 C):

1. In Maricopa County:
Township 8 North, Range 2 East And Range 3 East
Township 7 North, Range 2 West Through Range 5 East
Township 6 North, Range 2 West Through Range 6 East
Township 5 North, Range 2 West Through Range 7 East
Township 4 North, Range 2 West Through Range 8 East
Township 3 North, Range 2 West Through Range 8 East
Township 2 North, Range 2 West Through Range 8 East
Township 1 North, Range 2 West Through Range 7 East
Township 1 South, Range 2 West Through Range 7 East
Township 2 South, Range 2 West Through Range 7 East

2. In Pinal County:
Township 1 North, Range 8 East And Range 9 East
Township 1 South, Range 8 East And Range 9 East
Township 2 South, Range 8 East And Range 9 East
Township 3 South, Range 7 East Through Range 9 East

3. In Yavapai County:
Township 7 North, Range 1 East And Range 1 West Through Range 2 West

The biennial emissions inspection program for constant four-wheel drive vehicles is conditionally effective from and after January 1, 2002 if legislation is enacted to continue a Vehicle Emissions Inspection Program in a nonattainment area or maintenance area as defined in A.R.S. 49-401.01. This provision is in Section 8 of H.B. 2254. In addition, the program ends on July 1, 2009 pursuant to A.R.S. 41-3102.

H.B. 2254 specifies that a person who violates this article (Article 5. Vehicle Emissions Inspection Program) or any rule of the Director adopted under this article is guilty of a Class 2 misdemeanor. A person who makes or issues any imitation or counterfeit of any official certificate or certifications of inspection or waiver is guilty of a Class 5 felony. A person who knowingly demands or collects a fee for the inspection of a vehicle other than the fee fixed by the Director for the inspection of vehicles of the same class is guilty of a Class 2 misdemeanor.

A person who violates A.R.S. 49-541.01 B. is subject to a civil penalty of 100 dollars for a first violation. For a second violation of Subsection B within a one year period, a court will impose a civil penalty of 300 dollars. A court will impose a civil penalty of 25 dollars for a first time violation of Subsection B if the owner presents evidence that the vehicle is in compliance with this article (A.R.S. 49-541.01 D. and E.).

Collectively, the provisions in H.B. 2254 that apply to the Enhanced Emissions Testing of Constant Four-Wheel Drive Vehicles include A.R.S. 49-541.01 A, B, C, D, E, and F, and Section 8 of H.B. 2254.

3. <u>One-Time Waiver from Vehicle Emissions Test</u>

1996 ■ Arizona Legislature passed S.B. 1002 in 1996 which limits the issuance of a waiver for failure to comply with the emission testing requirements to one-time only beginning January 1, 1997 (A.R.S. 49-542 D.).

1997 Also, the Arizona Legislature passed House Bill 2237 in 1997 which requires the Arizona Department of Environmental Quality to submit a report on one-time vehicle waivers to the Governor, President of the Senate, and Speaker of the House of Representatives by September 30,1997. The report is required to include: a description of the air quality benefits from the measure; recommendations on making the provision more effective, considering the impact on motorists; and recommendations on improving motorists access to the repair grant program (Section 25 of H.B. 2237).

4. <u>Increased Waiver Repair Limit Options</u>

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which increases the amount a person must spend to repair a failing 1967-1974 vehicle in Area A to qualify for a waiver. The increased amount is $200 rather than the previous $100 (A.R.S. 49-542).

5. <u>Gross Polluter Option for I/M Program Waivers</u>

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires that in order to obtain a waiver from compliance with the Vehicle Emissions Inspection Program, the owner of a vehicle emitting more than twice the emission standard has to repair the vehicle sufficiently to reduce the emission levels to less than twice the standard (A.R.S. 49-542).

6. Catalytic Converter Replacement Program

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires a person whose vehicle fails the Vehicles Emissions Inspection Test due to a faulty catalytic converter to replace it in Area A. These vehicles are not eligible for a waiver. The catalytic converter replacements are exempt from the existing repair cost limits for qualification for a waiver. Also, $275,000 was appropriated from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 to the utilization of the Vehicle Repair Grant Program and to implement the Catalytic Converter Replacement Program (A.R.S. 49-542 and Section 39 of S.B. 1427).

7. Vehicle Repair Grant Program

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which appropriates $275,000 from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 to improve the utilization of the Vehicle Repair Grant Program and to implement the Catalytic Converter Replacement Program. The Vehicle Repair Grant Program also applies to Area A (Section 39 of S.B. 1427).

1998 The Arizona Legislature, in a December 1998 Special Session, passed H.B. 2001 which further enhanced the utilization of the Vehicle Repair Grant Program. For a vehicle that is issued a certificate of waiver after January 1, 1997, the vehicle's owner is eligible for a single grant from the Arizona Department of Environmental Quality without regard to participation in or eligibility for the food stamp program (A.R.S. 49-542 S. 1.)

8. Voluntary Vehicle Repair and Retrofit Program

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires Maricopa County to establish and coordinate a Voluntary Vehicle Repair and Retrofit Program in Area A. The County is required to coordinate the program with the Arizona Department of Environmental Quality and Arizona Department of Transportation. The program is required to begin by January 1, 1999 and provide for quantifiable emissions reductions based on actual emissions testing performed on the vehicle before repair and retrofit.

A vehicle owner may participate in the program if all of the following criteria are met: 1. The owner is willing to participate in the program. 2. The vehicle is functionally operational. 3. The vehicle has been titled in this state and registered in Area A for at least twenty-four months. 4. The vehicle is at least twelve years older than the current model year passenger car or light duty truck. 5. The vehicle fails the emissions test. It is important to note that

vehicles that are not required to take the emissions inspection test are not eligible to participate in the program.

The County is required to develop a Pilot Emissions Control Repair and Retrofit Program in cooperation with the ADEQ that has the following provisions:

1. Vehicle owners who qualify for the repair and retrofit program will pay the first $100 as a co-payment.

2. Vehicle owners that require more than $500 in repair costs or $650 in retrofit parts and labor costs are not eligible unless the vehicle owner chooses to pay additional costs.

Diesel powered motor vehicles with a gross vehicle rating of more than 8,500 pounds that are registered in Area A which fail any random roadside vehicle test conducted by the State are eligible for up to $1,000 in repair or retrofit costs from the program. Qualified vehicle owners will be responsible for one-half of the costs of the qualified repairs and the other one-half of the costs will be funded from the program up to $1,000. No more than 20 percent of the program funds in any year may be used for these purposes.
S.B. 1427 also establishes a Voluntary Vehicle Repair and Retrofit Program Fund consisting of monies appropriated by the Legislature and political subdivisions and gifts, grants, and donations. S.B. 1427 includes an appropriation of $800,000 from the State General Fund in fiscal year 1998-1999 for the Voluntary Vehicle Repair and Retrofit Program Fund.

The County Board of Supervisors is required to appoint an advisory committee composed of representatives from the Arizona Department of Transportation, Arizona Department of Environmental Quality, and the parties affected by the Voluntary Vehicle Repair and Retrofit Program, including automobile hobbyists and the automotive after-market products industry. The role of the committee is to advise and make recommendations on the development and implementation of the program.

By December 1 of each year, the County is required to prepare a report on the Voluntary Vehicle Repair and Retrofit Program that includes the number of vehicles repaired or retrofitted by model year, the cost effectiveness of the program in terms of dollars spent per ton of vehicle emissions reductions, any recommendations for improving the effectiveness of the program, and the administrative costs of the program. The report is required to be submitted to the Arizona Department of Environmental Quality, Arizona Department of Transportation, Speaker of the House of Representatives, President of the Senate, Governor, Secretary of State, and Director of the Arizona Department of Library, Archives, and Public Records (A.R.S. 49-474.03 and Section 34 and 36 of S.B. 1427).

9. Tougher Enforcement of Vehicle Registration and Emissions Test Compliance

1997 ■ Arizona Department of Transportation indicates that this measure would use additional methods to increase the registration compliance of residents. According to the December 1996 Report of the Governor's Air Quality Strategies Task Force, the Motor Vehicle Division (MVD) of the Arizona Department of Transportation (ADOT) has instituted a comprehensive enforcement program. Three key elements of the new program are a Registration Enforcement Team, a Registration Enforcement Tracking System, and a New Resident Tracking Program. Through public participation, consistent policy and procedure application, and new tracking methods, MVD will enforce the Arizona registration laws to ensure vehicles in question are registered properly. This will be an ongoing effort.

Another phase of the Program is an initiative to coordinate ADOT efforts with other law enforcement agencies to assist MVD personnel in enforcing registration compliance. Other initiatives include a system user agreement between MVD and the City Courts to utilize information in conjunction with registration compliance and discussions with U.S. West for obtaining information relating to new connect customers.
The Registration Compliance Program began in January 1994 with one full time employee responding only to complaints. In April of 1996, this program was enhanced with five MVD officers periodically conducting a statewide effort locating and issuing warning notices on vehicles suspected of being in violation of Arizona registration laws. This effort resulted in a substantial increase in Vehicle Licenses Tax (VLT) for 1996. As the program continues, there will be an enhanced focus on the local vehicles not in compliance.

Administration of the program began with a required staff time equivalent to one full time employee. Currently, the required staff time is equivalent to eight full time employees. Additional staff requirements for the initial phase of the Registration Compliance Program will require a total of 12 full time (active) employees and one supervisor. The funding allocated for implementation of the Registration Compliance Program is included as part of the overall MVD budget.

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires school districts and special districts in Area A to prohibit parking in employee parking lots by employees who have not complied with emissions testing requirements. Cities, towns, and counties in Area A and Area B are currently subject to this provision (A.R.S. 49-552).

1999 In 1999, the Arizona Legislature passed H.B. 2254 which requires each vehicle that is owned by the United States government and that is domiciled

in this state for more than ninety consecutive days and each vehicle that is owned by a state or political subdivision of this state to comply with A.R.S. 49-542. On compliance, the Arizona Department of Environmental Quality will issue a government entity compliance sticker for the vehicle. The government entity compliance sticker will be placed on the vehicle as prescribed by rules adopted by the Department.

If the vehicle does not have a current government entity compliance sticker, a law enforcement officer will issue a citation to the vehicle operator for a violation. On receipt of the abstract of conviction for a violation, the Arizona Department of Transportation will immediately suspend the privilege to operate the vehicle on the highways of the state until the vehicle complies with A.R.S. 49-542 (A.R.S. 49-557).

H.B. 2254 specifies that a person who violates this article (Article 5. Vehicle Emissions Inspection Program) or any rule of the Director adopted under this article is guilty of Class 2 misdemeanor. A person who makes or issues any imitation or counterfeit of an official certificate or certificates of inspection or waiver is guilty of a Class 5 felony. A person who knowingly demands or collects a fee for the inspection of a vehicle other than the fee fixed by the Director for the inspection of vehicles of the same class is guilty of a Class 2 misdemeanor.

A person who violates A.R.S. 49-541.01 B. is subject to a civil penalty of 100 dollars for a first violation. For a second violation of Subsection B within a one year period, a court will impose a civil penalty of 300 dollars. A court will impose a civil penalty of 25 dollars for a first time violation of Subsection B if the owner presents evidence that the vehicle is in compliance with this article (A.R.S. 49-541.01 D. and E.).

Collectively, the provisions in H.B. 2254 that apply to Tougher Enforcement of Vehicle Registration and Emissions Test Compliance include A.R.S. 49-557 and 49-541.01 D. and E.

10. Random Roadside Testing of Diesel Vehicles

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires the Arizona Department of Environmental Quality to implement a pilot random roadside emissions testing program for diesel vehicles over 8,500 pounds using the snap acceleration test developed by the Society of Automotive Engineers (J 1167). This program will not be implemented unless the Directors of the Arizona Department of Transportation and Arizona Department of Public Safety agree that the program can be conducted safely and in compliance with federal regulations relating to interstate travel and safety.

If the program is implemented by November 15, 1999, the ADEQ Director will report on the results of the pilot program, including pass and fail rates, the nature of the registration of the failing vehicles, the extent of noncompliance of the failing vehicles, and recommendations for implementation of a permanent program. The report will be transmitted to the Governor, Speaker of the House of Representatives, and President of the Senate (Section 35 of S.B. 1427).

11. Snap Acceleration Test for Heavy-Duty Diesel

1996 ■ Arizona Legislature passed S.B. 1002 in 1996 which requires that beginning on March 1, 1997, a diesel powered motor vehicle applying for registration or reregistration in Area A more than 33 months after the date of initial registration shall be required to take and pass an annual emissions test conducted at an official emissions inspection station or a fleet emissions inspection station as follows:

- a loaded, transient or any other form of test as provided for in rules adopted by the Director for vehicles with a gross vehicle weight rating of 8,500 pounds or less.

- a test that conforms with the Society of Automotive Engineers Standard J1667 for vehicles with a gross vehicle weight rating of more than 8,500 pounds (A.R.S. 49-542 F.2.(d).).

12. Require Pre-1988 Heavy-Duty Diesel Commercial Vehicles Registered in the Nonattainment Area to Meet 1988 Federal Emissions Standards; Provide Incentives to Encourage Voluntary Accelerated Vehicle Replacement By the Year 2004

1996 ■ Arizona Legislature passed S.B. 1002 in 1996 which requires that beginning on January 1, 2004, a diesel powered motor vehicle with a gross vehicle weight of more than 26,000 pounds and for which gross weight fees are paid pursuant to Section 28-206 in Area A will not be allowed to operate in Area A unless it was manufactured in or after the 1988 model year or is powered by an engine that is certified to meet or surpass emissions standards contained in 40 Code of Federal Regulations Section 86.088-11. This does not apply to vehicles that are registered pursuant to Title 28, Chapter 2, Article 1.1. (A.R.S. 49-542 F.7.).

1998 ■ Regarding incentives to encourage accelerated replacement by the year 2004, the Arizona Legislature passed S.B. 1427 in 1998 which provided that diesel powered motor vehicles with a gross vehicle rating of more than 8,500 pounds that are registered in Area A which fail any random roadside vehicle

test conducted by the State are eligible for up to $1,000 in repair or retrofit costs from the Voluntary Vehicle Repair and Retrofit Program. Qualified vehicle owners will be responsible for one-half of the costs of the qualified repairs and the other one-half of the costs will be funded from the program up to $1,000. No more than 20 percent of the program funds in any year may be used for these purposes. The Voluntary Vehicle Repair and Retrofit Program is administered by Maricopa County in coordination with the Arizona Department of Environmental Quality and Arizona Department of Transportation (A.R.S. 49-474.03 and Sections 34 and 36 of S.B. 1427).

13. Short-Term Reformulation: June 1, 1998 - September 30, 1998

1997 ■ Arizona Legislature passed H.B. 2307 in 1997 which contains requirements for the sale of gasoline for June 1998 - September 30, 1998 in Area A, subject to an appropriate waiver granted under Section 211 (c)(4) of the Clean Air Act, that meets the following fuel reformulation options:

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the Californian Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum 7.0 pound per square inch (psi) summertime vapor pressure requirements in A.R.S. Section 41-2083, Subsection F.

- Gasoline that meets the standards for Federal Phase I Reformulated Gasoline, as provided in 40 CFR Section 80.41, paragraphs (a) through (h), in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirement in A.R.S. Section 41-2083, Subsection F.

14. Long - Term Fuel Reformulation: From and After May 1, 1999

1997 ■ Arizona Legislature passed H.B. 2307 in 1997 which contains requirements for the sale of gasoline from and after May 1, 1999 in Area A, subject to an appropriate waiver granted under Section 211 (c)(4) of the Clean Air Act, that meets the following fuel reformulation options:

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the California Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirements in A.R.S. Section 41-2083, Subsections D and F.

- Gasoline that meets the standards for Federal Phase II Reformulated Gasoline, as provided in 40 CFR Section 80.41, paragraphs (a) through (h), in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirement in A.R.S. Section 41-2083 Subsections D and F.

- From and after November 1 through March 31 of each year, both of these fuels are required to meet the oxygenated fuel requirements in A.R.S. 41-2123.

By September 15, 1997, the Director of the Arizona Department of Environmental Quality in consultation with the Director of the Weights and Measures, is required to adopt rules for the 1998 and 1999 fuel reformulation requirements.

House Bill 2307 also provides that if the Environmental Protection Agency fails to approve the sale and use of both reformulated gasolines, the Director of the Arizona Department of Environmental Quality will adopt standards by rule for one of the following fuels:

- A gasoline that meets standards for Federal Phase II Reformulated Gasoline, as provided in 40 C.F.R. Section 80.41, paragraphs (a) through (h) in effect on January 1, 1997, that meets the maximum vapor pressure requirements of A.R.S. Section 41-2083, Subsections D and F. In addition, the requirements of A.R.S. Section 41-2123 must be met November 1 through March 31 of each year.

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the California Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum vapor pressure requirements of A.R.S. Section 41-2083, Subsections D and F. In addition, the requirements of A.R.S. Section 41-2123 must be met November 1 through March 31 of each year.

15. <u>Winter Fuel Reformulation: California Phase 2 Reformulated Gasoline with 3.5 Percent Oxygen Content November 1 through March 31</u>

1998 ■ Arizona Legislature passed H.B. 2347 in 1998 which contains requirements for all gasoline produced and shipped to Maricopa County and sold or offered for sale for use in motor vehicles in Area A from and after November 1, 2000 through March 31, 2001 and from the period beginning November 1 through March 31 of each subsequent year. The fuel must comply with the standards for California Phase 2 Reformulated Gasoline, including

alternative reformulations allowed by the predictive model, as adopted by the California Air Resources Board, and must meet the maximum vapor pressure requirements of 9 pounds per square inch in A.R.S. 41-2083, Subsections D and F. The fuel must also contain a minimum oxygen content by weight of 3.5 percent as required in A.R.S. 41-2123, Subsection A, Paragraph 2.

From November 1, 2000 through March 31, 2001 and each winter season of November through March thereafter, the Director of the Arizona Department of Weights and Measures is required to determine the average levels of the constituents in the gasoline sold or offered for sale in Area A. The Director of the Arizona Department of Environmental Quality must analyze the data and no later than July 1, 2001 and each July thereafter, determine the average daily carbon monoxide reductions resulting from the use of the gasoline during the preceding winter season. If the average daily carbon monoxide reductions resulting from the gasoline are less than 90 percent of the goal of 32 tons per day in 2001, 31 tons per day in 2003 and 30 tons per day in 2005, 29 tons per day in 2007, or 28 tons per day in 2009, the Arizona Department of Environmental Quality will immediately notify the Governor, President of the Senate, and Speaker of the Arizona House of Representatives.

Also, any registered supplier or oxygenate blender may petition the Director of the Department of Weights and Measures to authorize the use of other oxygenates if an ethanol shortage is imminent. A petition must: (a) Identify specific supply conditions that will result in a shortage of ethanol. (b) Identify which oxygenate or oxygenates will be blended into gasoline for sale or use in Area A. (c) Demonstrate that the alternative oxygenate blend comes closest to meeting a 3.5 percent by weight oxygen content at reasonable cost. (d) Specify a time period for compliance with any provision of A.R.S. 41-2123, Subsection A, not to exceed 60 days.

The Director of Weights and Measures will either grant or deny the petition within seven days of its receipt. The decision to grant a waiver will be equally equitable to all registered suppliers or oxygenate blenders. The petition may be reauthorized for up to 30 days if the shortage conditions continue. The Director of the Arizona Department of Weights and Measures is required to consult with the Director of the Arizona Department of Environmental Quality prior to granting, reauthorizing or denying any petition.

The legislation specifies the intent of the Legislature to re-evaluate the existing authorized measures as well as alternative measures if this winter gasoline reformulation does not result in the carbon monoxide emission benefits specified in the bill (A.R.S. 41-2124).

16. Limit Sulfur Content of Diesel Fuel Oil to 500 ppm

1996 ■ Arizona Legislature passed S.B. 1002 in 1996 which prohibits the sale of Diesel fuel (including off-road) in Area A that contains in excess of 500 ppm sulfur. In addition, federal regulations require that on-road Diesel fuel sold throughout the contiguous U.S. have a maximum sulfur content of 0.05 percent by weight (500 ppm). These provisions are contained in A.R.S. 41-2083 J.

17. Diesel Fuel Sampling and Reporting

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires that beginning on January 1, 1999 through July 1, 1999, gasoline refiners and other suppliers of diesel fuel that is supplied or sold as a final product for the fueling of diesel vehicles within Area A report to the Director of the Arizona Department of Weights and Measures on the quantity and quality of diesel fuel shipped to Maricopa County during the preceding month. The report is required to include by batch, the sulfur content, aromatic hydrocarbon content, cetane number, specific gravity, American Petroleum Institute gravity, and the temperatures at which ten percent, fifty percent, and ninety percent of the diesel fuel has boiled off during distillation. The report is due on the fifteen day of each month.

In addition, the report must contain a certification of truthfulness and accuracy of the data submitted. By October 1, 1999, the Director of the Arizona Department of Weights and Measures is required to report the results of the six month sampling and reporting period to the Director of the Arizona Department of Environmental Quality, Governor, Speaker of the Arizona House of Representatives and President of the Arizona Senate (Section 40 of S.B. 1427).

18. Alternative Fuel Vehicles for Local Governments, School Districts, and Federal Government/Low Emission Vehicle Requirements

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which establishes additional requirements for vehicles owned by cities and towns, and counties in Area A. These provisions also apply to bus fleets operated by the cities, towns, and Regional Public Transportation Authority; school districts with a membership of more than 3,000 located within or which has bus routes running within Area A; the issuance of tax credits or subtractions for alternative fuel vehicles authorized by state law; and the federal government fleets. At a minimum, the alternative fuel vehicles are required to comply with any one of the following:

1. The U.S. Environmental Protection Agency Standards for Low Emission Vehicles pursuant to 40 Code of Federal Regulations Section 88.104-94 or 88.105-94.

2. The vehicle engine is certified by the engine modifier to meet the Addendum to Memorandum 1-A of the U.S. Environmental Protection Agency, as printed in the Federal Register, Volume 62, Number 207, October 27, 1997, pages 55635-55637.

3. The vehicle engine is the subject of a waiver for that specific engine application from the U.S. Environmental Protection Agency's Addendum to Memorandum 1-A requirements and that waiver is documented to the reasonable satisfaction of the Department of Commerce Energy Office.

The cities, counties, and school districts which have been included within the boundaries of Area A are required to comply with the provisions of A.R.S. 9-500.04 C. through G., 15-349, and 49-474.01 C. through E. relating to the conversion of fleet vehicles to alternative fuels according to the following schedule:

- At least 18 percent of the total fleet by December 31, 2000.
- At least 25 percent of the total fleet by December 31, 2001.
- At least 50 percent of the total fleet by December 31, 2003.
- At least 75 percent of the total fleet by December 31, 2005.

These provisions do not apply to cities and towns with a population of less than 7,500 according to the most recent U.S. decennial census and that lie outside Area A. Also, S.B. 1427 authorizes that monies in Arizona Clean Air Fund may be used for a public awareness program for alternative fuels. An accounting of the Arizona Clean Air Fund expenditures are to be included in the annual report to the Legislature on the fund activities (A.R.S. 9-500.04, 15-349, 41-1516, 49-474.01, 49-573 and Section 42 of S.B. 1427).

1999 In 1999, the Arizona Legislature passed H.B. 2254 which requires an operator of a United States government owned vehicle fleet based primarily in this state that does not comply with the statutory timetable and percentage goals for alternative fuel vehicles to file a report with the Arizona Department of Commerce Energy Office, the House of Representatives Federal Mandates and States' Rights and Environment Committees, or their successor committees, and the Senate Government and Environmental Stewardship and Commerce, Agriculture and Natural Resources Committees, or their successor committees. The report will include the total number of vehicles in the operator's fleet by class and the percentage that

is capable of operating on alternative fuel. The operator is required to file the report on or before October 1, 1999, April 1, 2000 and October 1, 2000.

An operator of a fleet that does not file a report as prescribed will not operate a vehicle in Area A as defined in A.R.S. 49-541 ninety days after the reporting date. Once an operator of a fleet files the report, this subsection will not apply (A.R.S. 49-573 D. and E.).

19. Alternative Fuel Vehicles for State Government/Low Emission Vehicle Requirements

1998 ■ Arizona Legislature passed S.B. 1269 in 1998 which requires the Director of the Arizona Department of Administration (DOA) to appoint a State Motor Vehicle Fleet Alternative Fuel Coordinator to develop, implement, document, monitor and modify as necessary a Statewide Alternative Fuels Plan in consultation with all state agencies and departments that are subject to the alternative fuel requirements. Specifically, the plan is to include the agencies currently exempt from the state fleet alternative fuel conversion requirements (Arizona Department of Public Safety, Arizona Department of Corrections, Universities and Community Colleges, and Arizona State School for the Deaf and the Blind). These agencies are to submit their programs for alternative fuels and fuel economy to the Coordinator.

The Coordinator is required to approve all vehicle acquisitions by the state and assume several functions of the Director relating to the acquisition of alternative vehicle fuel (AFVs) refueling facilities, the development of the vehicle fleet energy conservation plan and the identification of the appropriate AFVs for each state agency. The legislation requires an increasing percentage of new state vehicles weighing less than 8,500 pounds purchased for operation in Maricopa and Pima counties, including all of the agencies exempted from the DOA fleet, to be capable of operating on alternative fuels. The schedule is as follows:

- 10 percent of all 1997 model years purchased
- 15 percent of all 1998 model years purchased
- 25 percent of all 1999 model years purchased
- 50 percent of all 2000 model years purchased
- 75 percent of all 2001 model years purchased

In addition, S.B. 1269 requires an increasing percentage of the AFVs weighing less than 8,500 pounds purchased for operation in Maricopa County to comply with the Environmental Protection Agency's standards for Low Emission Vehicles (LEVs) starting in model year 2000.

The schedule is as follows:

- 40 percent of model year 2000 AFVs
- 50 percent of model year 2001 AFVs
- 60 percent of model year 2002 AFVs
- 70 percent of model year 2003 AFVs

Other provisions in S.B. 1269 include a deadline of December 31, 1999, for the Arizona Department of Administration to convert 40 percent of the DOA administered state fleet to alternative fuels. Fire suppression vehicles are excluded from the alternative fuel conversion requirements for the state fleet. For state agencies that use alcohol fueled AFVs, it must be demonstrated to the Director of DOA that the fuel for the vehicle is available within a ten mile radius of the primary home base for that vehicle.

Regarding reporting requirements, all state agencies, including those exempted from the state fleet, are required to report annually to the Director of DOA on vehicle costs, operation, maintenance, mileage and any other information that the Director deems necessary for the submittal of the annual report to the Legislature and the Governor. The Director of the DOA is required to submit an annual report to the Legislature, the Governor and each of these branches budget offices that provides information about the state fleet including detailed information regarding the conversion of the fleet to alternative fuels (A.R.S. 28-5805 and 41-803).

20. Alternative Fuel Vehicle and Equipment Tax Incentives/Low Emission Vehicle Requirements

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which extends the existing individual and corporate tax credit for the purchase or conversion of an alternative fuel vehicle or the purchase of an alternative fuel delivery system through 2001 and expands the tax credit to include minimum three year leases of an alternative fuel vehicle. It also increases the tax credit to $1,000 from $500 in 1997 and $250 in 1998 (A.R.S. 43-1086).

1998 In 1998, the Arizona Legislature passed S.B. 1269 which provides a variety of tax incentives and financial assistance to encourage the use of alternative fuel vehicles (AFVs). The definition of alternative fuel is expanded to included an emulsion of water-phased hydrocarbon fuel that contains at least 20 percent water and that complies with one of three specified EPA standards and in combination of at least 70 percent alternative fuel and not more than 30 percent petroleum-based fuel for an engine that meets an equivalent of the EPA Low Emission Vehicle (LEV) standard.

The following tax incentives are provided in the bill:

1. AFV's and alternative fuel conversion equipment are exempt from the retail and personal property rental classifications and use taxation.

2. Corporate and individual income taxpayers are authorized to take both the AFV and equipment subtraction and credits for AFVs and equipment, as well as obtain a grant from the Arizona Clean Air Fund.

3. Individual and corporate income tax credits for tax years 1998 through 2001 are increased from $1,000 to $2,000 for the purchase, lease, or conversion of a dedicated AFV or purchase of a dedicated alternative fuel delivery system. The maximum credit for a bi-fueled AFV remains at $1,000.

4. Nonrefundable individual and corporate income tax credits for tax years 1998 through 2001 are authorized for expenses associated with constructing or operating an alternative fuel fueling station. The amount of the credit for a public-accessible station or a station dispensing renewable fuel is 50 percent of the costs incurred, up to $400,000. For other stations, the credit is the lesser of 25 percent of the costs incurred or $200,000.

5. The maximum corporate income tax subtraction for the purchase of a new AFV is increased from $5,000 to $10,000. This becomes effective for taxable years after December 31, 1997.

6. The maximum corporation income tax subtraction for the conversion to an AFV is increased from $3,000 to $5,000. This becomes effective for taxable years after December 31, 1997.

7. Nonrefundable individual and corporate tax credits are authorized for the purchase or lease (for at least three years) of original equipment manufactured AFVs. For tax years 1999 through 2011, the amount of credit ranges from 50 to 90 percent of the incremental cost above the cost of a conventionally fueled vehicle, based on the emissions levels of the AFV. For tax years 2012 through 2019, the amount of credit ranges from 25 to 75 percent of the incremental cost above the cost of a conventionally fueled vehicle, based on the emissions levels of the AFV.

8. Grants from the Arizona Clean Air Fund (ACAF) are made available for AFVs purchased or leased and the amount of the grant is increased from $1,000 to $2,000.

Passed by the Arizona Legislature in 1998, S.B. 1427 tax credits or subtractions for alternative fuel vehicles authorized by state law will only be allowed if the vehicle meets one of the following:

1. The vehicle is certified to meet at a minimum the U.S. Environmental Protection Agency Low Emission Vehicle Standard pursuant to 40 Code of Federal Regulations Section 88.104-94 or 88.105-94.

2. The vehicle meets the requirements of the Addendum to Memorandum 1-A, issued by the U.S. Environmental Protection Agency, as printed in the Federal Register, Volume 62, Number 207, October 27, 1997, pages 55635-55637.

3. The vehicle is the subject of a waiver for that specific engine application from the U.S. Environmental Protection Agency's Memorandum 1-A requirements and that waiver is documented to the reasonable satisfaction of the Department of Commerce Energy Office (A.R.S. 1-215, 41-1516, 42-5061, 42-5071, 42-5159, 43-1026, 43-1086, 43-1128.01, and 43-1174).

21. Public Awareness Program for Alternative Fuels

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which allows monies from the State Clean Air Fund to be used to conduct public awareness programs for alternative fuels (A.R.S. 41-1516).

22. National Low Emission Vehicle Program

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires the State to participate in the National Low Emission Vehicle Program adopted in 40 Code of Federal Regulations Part 9, Part 85 and Part 86 effective March 9, 1998, as part of the long term air quality strategy. The State will not bear any of the administrative costs of the program. Also, the State retains the authority to adopt any alternative emissions reduction program which demonstrates air quality benefits for the State (A.R.S. 49-556).

23. Voluntary Gasoline Vehicle Retirement Program/Maricopa County Travel Reduction Program

1997 ■ Maricopa County indicates that this measure involves implementing a program to purchase and retire vehicles which produce excessive emissions, particularly pre-1980 model year light duty automobiles and trucks. Maricopa County is in the process of revising its Trip Reduction Ordinance to include

the flexibility provisions authorized under A.R.S. Section 49-588 which includes voluntary vehicle trade-outs. The proposed revisions will allow tradeouts that have been completed after October 16, 1996 to be used to achieve the emission reduction goals established under the ordinance.

May 1997 -- A public workshop has been scheduled on May 22, 1997 to discuss the proposed revisions to the Trip Reduction Ordinance.

June 1997 -- A public hearing and Board consideration of the proposed revision is scheduled for June 25, 1997.

August 1997 -- Submittal as a SIP revision to ADEQ and EPA.

Personnel and funding will be provided through existing staff and funding. Additional resources will not be necessary to fulfill the commitment set forth.

Data collection and survey data analysis are consistent as TRP staff process and analyze all employers' surveys to prepare summary results which are then used by the employer to develop a trip reduction plan. When the TRP plan is submitted, it undergoes an intensive analysis by division staff. The staff follow a checklist which contains statute requirements, ordinance requirements, and Task Force guidelines.

After the plan has been approved, but prior to the next annual survey, division staff contact the transportation coordinator by phone or in person to monitor the implementation of the plan. They complete a monitoring checklist. If the plan has not been implemented, the Task Force shall describe the inadequacies and shall direct modifications in the plan implementation. If the plan as modified is not approved, the Task Force shall evaluate all supporting data and determine if enforcement action is necessary.

24. Oxidation Catalyst for Heavy Duty Diesel Vehicles

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which requires cities, towns, Maricopa County, school districts, the state and the federal government to install a technology (oxidation catalyst) on their heavy duty Diesel vehicles if the entities receive a waiver to opt out of the alternative fuel requirements for fleets. The heavy duty Diesel vehicles with a gross vehicle weight of 8500 pounds or more manufactured in or before model year 1993 would have the catalyst installed based upon the following time schedule in A.R.S. 49-555:

a. 25 percent of the Diesel fleet vehicles by December 31, 1998.

b. 40 percent of the Diesel fleet vehicles by December 31, 1999.
c. 60 percent of the Diesel fleet vehicles by December 31, 2000.
d. 80 percent of the Diesel fleet vehicles by December 31, 2001.
e. 100 percent of the Diesel fleet vehicles by December 31, 2002.

The technology is to be effective at reducing particulate emissions by at least 25 percent and be approved by the Environmental Protection Agency pursuant to the Urban Bus Engine Retrofit/Rebuilt Program. This measure applies to Area A which is generally the nonattainment area (A.R.S. 9-500.04, 15-349, 41-803, 49-474.01, 49-573 and 49-555).

25. Mass Transit Alternatives

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which allows cities and towns to voluntarily refer an advisory question relating to public transportation to the voters at a special or general election (A.R.S. 9-500.15).

1997 ■ Town of Gilbert began providing public transit and dial-a-ride service during 1996. A local bus route in Mesa was extended through Gilbert, providing connections with several regional bus routes. This route provides 370 daily miles of service in Gilbert, amounting to 94,350 service miles annually, and is operated Monday through Friday from approximately 5 a.m. until 7 p.m.

An express bus route was extended into downtown Gilbert, providing service for commuters to downtown Phoenix. The Gilbert portion of this route accounts for 30 daily and 7,650 annual service miles, and is operated Monday through Friday from approximately 5 a.m. until 6:30 p.m.

In addition, the Town of Gilbert began providing town-wide dial-a-ride service by joining the Mesa/Chandler Dial-a-Ride (now the Mesa/Chandler/Gilbert Dial-a-Ride). This service is also provided Monday through Friday from about 4 a.m. until 7 p.m.

The Gilbert Town Council approved funding in May 1996. The Town of Gilbert began providing express bus service in August 1996. The Town of Gilbert began providing dial-a-ride service in September 1996. The Town of Gilbert began providing local bus service in March 1997.

Participation in regional and local transit planning is allocated through the annual budget process. The Gilbert Town Council dedicated $300,000 for the above described public transit measures during FY 1996-97.

1997 ■ City of Glendale is currently participating in a Major Investment Study (a regional planning process) to evaluate multi-modal transportation

technologies and alignment alternatives to reduce traffic congestion and increase urban mobility. One part of the study is expected to be devoted to evaluating the feasibility of a regional fixed guideway transit system linking Glendale to the Greater Phoenix Metropolitan area. The City's Transportation Department is responsible for this measure. Legal authority for this action is provided under Section 9-240, "General powers of common council" of the Arizona Revised Statutes.

Project Initiation/Public Involvement Program: April 1997
Initial Screening of Alternatives: July 1997
Evaluation of Alternatives: November 1997
Conceptual Design/Detailed Evaluation of Alternatives: February 1998
Final Report: April 1998
End of Contract: June 1998

Funding will be determined through the City's annual budget development process.

1997 ■ City of Goodyear has participated in the Southwest Valley Transportation Study to develop a comprehensive transportation plan for the Southwest Valley. This study is a guide for future multi-modal transportation planning and programming for the next 25 years. The study contains alternative transit components and has been adopted by council.

Project initiation/Public involvement program: April 1998
Initial screening of alternatives: July 1998
Evaluations of Alternatives: November 1998
Conceptual Design/Detailed Evaluation of Alternatives: February 1999
Final Report: April 1999
End of Contract: June 1999.

The Transportation Study is completed and it contains a five-year (1996-2001) transportation improvement program, a ten year (2001-2006) medium range transportation plan, and a long range plan for 25-years. The five-year program is based on the current MAG Regional Transportation Improvement Program for the City. The City of Goodyear and Maricopa County Department of Transportation Capital Improvement Programs were also used for the study. The mayors of the Southwest Valley are working cooperatively to address regional transportation issues.

The City is exploring a local bus service, an express bus service, an inter-city bus service, and a Dial-a-Ride program. An option the City may have for mass transit is a commuter rail service. Although it may not be feasible at

this time, it may require serious consideration in the future. Funding will be determined through the City's annual budget process.

1997 ■ City of Mesa is participating in a cooperative effort with the Federal Transit Administration (FTA), the Maricopa Association of Governments (MAG), the Regional Public Transit Authority (RPTA) and the cities of Tempe, Scottsdale, Phoenix and Glendale to conduct feasibility studies to evaluate the need and general location for high capacity transit corridors throughout the metropolitan area. This effort will also include a series of Major Investment Studies which focus on subregions within the metropolitan area. Studies are also planned to evaluate the feasibility of high-capacity transit options such as light rail, bus ways, and commuter rail.

These studies are part of a continuing effort to evaluate transportation options. Related studies include the Arizona Passenger Rail Feasibility Continuation Study (1994), Downtown Phoenix Rail Trolley Feasibility Study (1995), Commuter Rail Demonstration Project Feasibility Study (1995), and Major Investment Studies for the Squaw Peak and Superstition Corridors-Phase I.

Bus service in Mesa will continue to expand; one new express route has been added during the last year and during 1998 it is anticipated that Saturday service will be added to some sections of the system. The City will continue to explore additional funding sources to further expand the bus system. Evaluation of the feasibility of transit options is ongoing. Participation in regional transit planning is allocated through the annual budget process.

1997 ■ City of Peoria indicates that this measure will require commitment by other neighboring cities, State, and County jurisdictions. Plans and funding alternatives require commitment by all, coordinated through RPTA. Existing Public Works and Engineering Department Engineering Division staff will continue to attend scheduled meetings by RPTA to discuss and work out alternatives.

1997 ■ City of Phoenix is participating in a cooperative effort with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Maricopa Association of Governments (MAG), the Regional Public Transit Authority (RPTA), and the cities of Tempe, Scottsdale, Mesa, and Glendale to conduct feasibility studies to evaluate the need and general location for high capacity transit corridors throughout the metropolitan area. This effort will also include a series of Major Investment Studies which focus on subregions within the metropolitan area. Studies are also planned to

evaluate the feasibility of high-capacity transit options such as light rail, busways, and commuter rail.

These studies are part of a continuing effort to evaluate transportation options. Related studies include the Arizona Passenger Rail Feasibility Continuation Study (1994), Downtown Phoenix Rail Trolley Feasibility Study (1995), Commuter Rail Demonstration Project Feasibility Study (1995), and Major Investment Studies for the Squaw Peak and Superstition Corridors-Phase I.

The City has worked with the RPTA to submit an application for federal discretionary funds from the 1997 re-authorization of the Intermodal Surface Transportation Efficiency Act (ISTEA) and the FY 1998 U.S. Department of Transportation Appropriations Bill. The application requests $130 million to fund the initial 10-mile segment of a high-capacity rail system connecting the downtown areas of Phoenix and Tempe.

The City has also worked with the RPTA to submit an application for funds to support the purchase of transit buses from the 1997 re-authorization of the Intermodal Surface Transportation Efficiency Act (ISTEA) and the FY 1998 U.S. Department of Transportation Appropriations Bill. The application requests $29.2 million in fiscal year 1998 to purchase new buses. Matching funds will be required from local communities requesting buses.

The Major Investment Study for the Phoenix-Tempe corridor is in progress. Applications for ISTEA and DOT Appropriation Bills were submitted in February 1997. Participation in regional transit planning is allocated through the annual budget process.

1997 ■ City of Scottsdale is participating in a cooperative effort with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Maricopa Association of Governments (MAG), the Regional Public Transit Authority (RPTA), and the cities of Phoenix, Tempe, Mesa, and Glendale to conduct feasibility studies to evaluate the need and general location for high capacity transit corridors throughout the metropolitan area.

One of the City of Scottsdale Transportation Department, Transit Division program objectives stated in the Biennial Budget for fiscal years 1997-1999 is completion of a Major Investment Study by December 1997, which focuses on subregions within the Phoenix metropolitan area. Studies are also planned to evaluate the feasibility of high-capacity transit options such as light rail, busways, and commuter rail.

These studies are part of a continuing effort to evaluate transportation options. Related studies include the update of the Transit Plan which is a Transportation Department Objective for fiscal years 1997-1999. Implementation is in progress. Participation in regional transit planning is allocated through the annual budget process.

1997 ■ City of Tempe indicates that this measure is envisioned as a major change to the scope and service levels offered by the existing public transportation system in the region.

The City of Tempe is currently participating in a cooperative effort with the Federal Transit Administration (FTA), the Maricopa Association of Governments (MAG), the Regional Pubic Transportation Authority (RPTA), and the cities of Phoenix, Scottsdale, Mesa and Glendale to conduct feasibility studies to evaluate the need and general location for high capacity transit corridors throughout the metropolitan area. This effort includes a series of Major Investment Studies which focus on subregions within the metropolitan area. The studies will evaluate the feasibility of high-capacity transit options such as light rail, busways and commuter rail. One subregional study area is downtown Tempe, Arizona State University, and Rio Salado. The City would continue these study efforts.

The City is working with the RPTA in an application for federal discretionary funds from the 1997 reauthorization of the Intermodal Surface Transportation Efficiency Act (ISTEA) and the FY 1998 U.S. Department of Transportation Appropriations Bill. The application requests $130 million to fund the initial ten mile segment of a high-capacity rail system connecting the downtown areas of Tempe and Phoenix.

The City is also working with the RPTA in the application for funds for purchase of transit buses from the 1997 reauthorization of the ISTEA and the FY 1998 U.S. Department of Transportation Appropriations Bill. The application requests $29.2 million in fiscal year 1998 and would require matching funds from local communities requesting buses.

The Major Investment Study for the Phoenix-Tempe corridor and the downtown Tempe, ASU, and Rio Salado is in progress. Applications for ISTEA and DOT Appropriation Bills were submitted in February 1997. Participation in regional transit planning is provided through the dedicated sales tax for transit.

1997 ■ Regional Public Transportation Authority indicates that this measure involves implementing the long range transit improvements as described in the Regional Transit Plan for Maricopa County, Arizona prepared by the RPTA

Citizen Advisory Committee. This plan expands the days and times when bus service is available and more than doubles the annual miles of bus service. Service improvements would include adding new bus routes and increasing the frequencies on existing routes. By the fifth year, the plan calls for:

- 29 million miles of annual bus service
- 625 buses in services
- All routes operating 7 days a week
- Service 5 a.m. to midnight, Monday-Saturday
- Service 6 a.m. to 8 p.m., Sundays and Holidays
- Dial-a-Ride service would triple

The plan also calls for conducting a feasibility study to determine the need for rail transit.

The Regional Transit Plan for Maricopa County, Arizona was adopted by the Regional Public Transportation Authority Board of Directors on July 9, 1992. In November, 1994, voters rejected a joint proposal which would have provided a half-cent tax increase for highways and transit. Since that time, the RPTA Board has been studying alternative methods to finance the plan. In 1996, voters in Tempe approved a one-half of one percent sales tax increase dedicated to public transit improvements. The City of Phoenix will hold an election on such a measure on September 9, 1997, and the Council of the City of Scottsdale is considering placing such a measure before its electorate on the same date. If these two communities follow Tempe's course, the transit needs of approximately 58 percent of the population of the MAG region can be addressed by such a dedicated funding source. Such action may compel other communities in the region to follow suit, as they may otherwise find it difficult to attract new employers and other developments with a lower level of infrastructure.

The level of personnel committed to transit operations in Fiscal Year 1997-1998 is equivalent to 5.5 FTE. This plan has not yet been funded (other than in Tempe). Implementation will require securing the new funding sources dedicated to public transportation described above. The RPTA is responsible for transit planning and program implementation. The projected RPTA operating budget for fiscal year 1997-1998 is estimated at $17.9 million. Sources of operating revenue include federal and state grants, RPTA sales tax, farebox revenues, and other income sources including interest.

26. Develop Intelligent Transportation Systems

1997 ■ City of Chandler is participating in the AzTech Model Deployment Initiative, a three-year project to demonstrate application of currently available technology to improve collection and dissemination of information such as

road closures, current operating conditions and services available for all modes of travel. Another goal of the project is to improve interagency coordination for traffic control and incident management. The City of Chandler has representatives on the AzTech Executive Committee and AzTech Technical Oversight Committee. The City will provide information about City of Chandler operations to support development of a data base, collection system, and communications network covering the Phoenix metropolitan area. Responsible agencies include Arizona Department of Transportation, Maricopa County, and the City of Chandler Public Works Department, Transportation Division. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of Glendale is participating in a regional effort to demonstrate intelligent transportation systems to enhance traffic flow and promote safety. A total of eight transportation corridors in the Phoenix Metropolitan area have been selected for testing. Three of the corridors are partially located in Glendale (Bell Road, Glendale Avenue and Grand Avenue). Currently in progress. The City's Transportation Department is responsible for implementing this measure. Funding for the measure will come from Glendale's share of the $7.5 million Intelligent Transportation Systems grant awarded to Arizona by the U.S. Department of Transportation.

1997 ■ City of Goodyear is participating in a regional effort to demonstrate intelligent transportation systems to enhance traffic flow and promote safety. Many jurisdictions in the west valley are coordinating with Maricopa County Department of Transportation to address transportation issues concurrently. The concept is to promote communication between the communities to ensure smoother traffic flows. Currently in progress. The City's Public Works Department is responsible for implementing this measure. The City is working with Arizona Department of Transportation and Maricopa County Department of Transportation for assistance in applying this measure. Funding for the measure will come from the City's annual budget process.

1997 ■ City of Mesa is working with the Arizona Department of Transportation to coordinate the synchronization of City traffic signals with ADOT freeway signals. Synchronization will be achieved by sharing traffic information through a new communication link between the City's traffic management system and the ADOT Freeway Management System (FMS). The interconnect of the two signal systems will allow both agencies the ability to share information on a real-time basis and adapt signal timing more effectively for unusual traffic conditions such as accidents and other obstructions.

The City is also working on a model deployment initiative (AzTech) for the development of intelligent transportation systems to provide feedback to motorists on unusual conditions. Mesa is participating in a $7.5 million project to develop this system. The City also works with the ADOT to ensure that timing for freeway ramp metering is designed to avoid unnecessary local traffic congestion. Implementation is ongoing. Funding is allocated through the annual budget process. Of the $7.5 million regional Intelligent Transportation System funding for implementation, Mesa will be providing in-kind matches including services, staff time, and possibly funding.

1997 ■ Town of Paradise Valley will be working with the Maricopa Department of Transportation on developing this measure in the form of monitors, signage and cameras on Lincoln Drive. This may be done with an inter-governmental agreement as the Arizona Department of Transportation grant money becomes available to Maricopa County. Town of Paradise Valley Engineering Department.

The plan will be presented to the Council this fiscal year. The Town Engineer will spend approximately 200 hours on this project at a cost of around $7,000. This is funded by the Town's annual budget. The Maricopa County Department of Transportation will fund the program with grant funds from the Arizona Department of Transportation.

1997 ■ City of Peoria participated with Maricopa County and other regional Cities to determine the existing and planned levels of signal control and coordination. All agreed that a coordinated, regional approach of traffic management is needed. Ten arterials were selected for development of regional signal coordination strategies. Peoria is willing to assist in any way to implement a signal coordination system. Maricopa County will be the lead agency and will prepare a schedule. The City will enter into an intergovernmental agreement.

1997 ■ City of Phoenix will work with the Arizona Department of Transportation (ADOT) to coordinate the synchronization of City Traffic Signals with ADOT Freeway signals. Synchronization will be achieved by sharing traffic information through a new communication link between the City's Advantage Traffic Management Center and the ADOT Freeway Management System (FMS). The interconnect of the two signal systems will allow both agencies the ability to share information on a real-time basis and adapt signal timing more effectively for unusual traffic conditions such as, accidents and other obstructions. Phoenix, with its 835 signals and central location, is key to the effectiveness of the program.

The City also works with the ADOT to ensure that timing for freeway ramp metering is designed to avoid unnecessary local traffic congestion. Implementation is in progress. Funding is allocated though the annual budget process. $1.8 million in funding has been allocated regionally for the connections of the ADOT FMS to seven Valley cities including Phoenix.

1997 ■ City of Scottsdale will work with the Arizona Department of Transportation (ADOT) and neighboring cities to coordinate the synchronization of City of Scottsdale traffic signals. Synchronization will be achieved by sharing traffic information through communication links.

Three program objectives for the City of Scottsdale Transportation Department, Traffic Engineering Division, which are reported in the Biennial Budget for fiscal years 1997-1999 are:

- Install preliminary phase of comprehensive traffic detection system by June 1998.
- Install preliminary phase of Traveler Information System by December 1997.
- Improve operation and accident analysis through video and computer technology enhancement.

The City of Scottsdale has negotiated a long-term agreement with U.S. West for leased telephone lines to communicate with the City's traffic signals. Implementation is in progress.

Funding is allocated through the biennial budget process. $1.8 million in funding has been allocated regionally for the connection of the ADOT FMS to seven Valley cities including Scottsdale.

1997 ■ City of Tempe indicates that this measure involves the application of new technology to produce more efficient use of existing transportation corridors. The City will work with the Arizona Department of Transportation (ADOT) to coordinate the synchronization of City traffic signals with ADOT Freeway signals. The City will also participate in AzTech Model Deployment, Traffic Signal Coordination across city boundaries, and Advanced Public Transit system.

Implementation in progress. Funding for the Transportation Division is allocated through the annual budget process. A federal grant of $7.5 million was awarded to the region in October 1996. The grant requires matching funds from local public and private sector funds . Funds will be used as follows:

$2 million to implement advanced information system, expanded on existing use of variable message signs and ADOT Internet page (real-time freeway camera views) and set up kiosks showing up-to-date information at shopping centers, bus terminals and the airport.

$1.8 million will be used to standardize and link traffic signal synchronization systems used by the State, Phoenix, Tempe, Scottsdale, Glendale, and Mesa.

$1.7 million to install cameras and sensors onto seven of the busiest streets in the Valley.

$700,000 to be used to install automatic vehicle locators on buses and $100,000 on public outreach and education.

In addition, a city employee, Jim Decker, has been loaned to the ADOT for implementation of the Model Deployment Program.

1997 ■ Maricopa County indicates that the term "Intelligent Transportation Systems" includes a variety of technological applications intended to produce more efficient use of existing transportation corridors. The primary application currently implemented in the Maricopa County area is the Freeway Management System (FMS) operated by the Arizona Department of Transportation. The FMS combines the use of in-road sensors, surveillance cameras, ramp metering controls and variable message signs to detect and respond to freeway incidents.

Maricopa County is a major participant in the AzTech, public/private partnership to provide a variety of technological applications to produce more efficient use of existing transportation systems. As the regional jurisdiction, Maricopa County is devoting its resources and personnel to coordinating ITS efforts among smaller jurisdictions.

The AzTech Intelligent Transportation System (ITS) Model Deployment Initiative (MDI) is a seven year project (two year implementation and five year operation) that will develop an integrated intelligent transportation system for the Phoenix metropolitan area. When fully implemented in 1998, AzTech will produce freeway and arterial street networks that are safer and more efficient for the traveling public, decreasing travel time and enhancing traveler mobility. Once complete, the system will serve approximately 97 percent of the state's population.

AzTech is being developed through a wide partnership between the public and private sectors. Management of traveler information and client

development is administered through a cooperative multi-agency and corporation effort.

Approximately $2.4 million will be used to implement an advance traveler information system which will expand on the existing use of variable freeway message signs and the ADOT Internet page (of real-time freeway camera views and link speeds) and set up kiosks showing up-to-date travel information at shopping centers, bus terminals, and the airport. It will also transmit information to pagers, mobile and stationary computers and in vehicle navigation devices.

Approximately $2.3 million will be used to standardize and link traffic signal synchronization systems used by the State and seven cities, including Phoenix, Tempe, Scottsdale, Glendale, and Mesa.

Approximately $1.7 million will install cameras and sensors (as currently used on freeways) onto eight of the busiest streets in the Valley. This will help traffic flow especially during special events. Maricopa County has committed $1.8 million of the total funding of this project from the Department of Transportation Budget. $6.4 million of the funds are from a FHWA grant, and $2.8 million is coming from ADOT. Other local jurisdictions are also participating in the funding.

1997 ■ Arizona Department of Transportation indicates that the term "Intelligent Transportation System" (ITS) includes a variety of technological applications intended to produce more efficient use of existing transportation corridors. The primary application currently in the Maricopa County area is the Freeway Management System (FMS) operated by ADOT. The FMS combines the use of in-road sensors, surveillance cameras, ramp metering controls, and variable message signs to detect and respond to freeway incidents. The system is managed from the ADOT Traffic Operations Center located on Durango Street just west of Interstate 17. This will be an ongoing effort.

A copy of the ITS Project Outline and Funded Projects as shown in the ADOT ITS Semi-Annual Report Project Life Cycle Plan is being provided to MAG for the required implementation schedule information. This report also contains information on future, and completed projects, and information on the Freeway Management System projects. The ITS Program has several user service bundles, or activities. The Freeway Management System currently utilizes ITS technology such as Incident Management and En-Route Drive Information. Route Guidance, or in-vehicle navigation system will soon be available through ITS technology as well as electronic clearance at the Ports-of-Entry. Longer term projects include those that would require

automated highway systems for advanced vehicle control and safety systems. (Attachments)

The current plan contains a total of 17 phases covering an envisioned 240 miles of freeway for the Phoenix area. The first two phases have been implemented and the third, fourth, and fifth phases are in the process of being instituted. In addition, a $7.5 million grant was received from the FHWA to become a model for deployment of ITS. Only four of 23 proposals were selected for ITS model deployment. This project is referred to as the AzTech Project.

In October 1996, the U.S. Department of Transportation awarded to Arizona a $7.5 million grant to provide for ITS technology. The grant requires local public and private sector funds to match every federal dollar. Administration of the plan development and program began with required staff time equivalent to seven full time employees. Other funding sources include local governments and the private sector.

1997 ■ Regional Public Transportation Authority indicates that a total of 88 buses will be equipped with automatic vehicle locators by December 1997. There will be 23 City of Mesa buses, 55 City of Phoenix buses, and ten RPTA buses. The City of Phoenix and RPTA buses will be operated on routes 0, and 72, the Red Line and the Blue Line. The purpose of the project is to provide passengers with real time travel information of buses within the transit system. Information will be made available through variable message signs at selected locations throughout the Phoenix metropolitan region.

This measure will be implemented by the City of Phoenix Public Transit Department, the Regional Public Transportation Authority (RPTA), and the cities of Mesa, Scottsdale, and Tempe. Implementation of this measure is one activity made possible by a U.S. Department of Transportation grant for $7.5 million that was awarded to the State of Arizona to provide intelligent transportation systems. This measure is expected to be implemented in December 1997.

Administration of this measure is accomplished by the equivalent of 0.25 full time employee. The administrator is an employee of the City of Phoenix Public Transit Department, but officially represents both the City of Phoenix and the RPTA. The estimated cost of this measure is $700,000, consisting equally of the "Americas Model Deployment Initiative for Intelligent Transit Systems" federal grant funds, and local match monies.

27. <u>Special Event Controls-Required Implementation from List of Approved Strategies</u>

1997 ■ City of Avondale is working with the public and private sector stakeholders to evaluate options for managing parking and traffic associated with activity

centers and PIR events. The City is developing a downtown parking program. Community Development will also work with the City departments, PIR, cultural and downtown property owners, and other stakeholders to address parking issues, to identify linkages to alternative modes of travel, and to consider the availability of public and private transportation services for these venues.

Expansion of Public Transportation Programs (Measure 97-TC-5) may result in increased funding for transit and ultimately help provide transit options for travel to activity centers. Without expansion of the current public transportation system, options of encouraging alternative transportation will be limited. However, Fiscal Year 1997-1998 the City has expanded the public transportation system to provide service to three new communities. Also see measure 97-TC-10: Site Specific Transportation Control Measures. Implementation is ongoing. Funding is allocated through the annual budget process.

1997 ■ City of Chandler indicates that transit service between the downtown area and remote parking areas (shopping center parking lots along north Arizona Avenue) was implemented on a trial basis during the last festival in Chandler. Since this festival attracts more than 200,000 people over a three-day period, this resulted in a reduction to the number of cars cruising the downtown area in search of parking spaces and less idling as a result of reduced congestion in and near downtown parking areas. Beginning 1998, remote parking areas will be provided for each of the two festivals Chandler holds each year. Funding is allocated through the annual budget process.

1997 ■ City of Glendale indicates that in the event that Maricopa County or the Arizona Department of Environmental Quality develops a rule with regionwide applicability, the City will consider implementing this measure. At this time, there is no legal definition of a "special event center". The City will explore the implementation of this measure after the legal definition of a special event center is developed by Maricopa County or the Arizona Department of Environmental Quality. The City Traffic Engineer will be responsible to explore the feasibility of implementing this measure. Funding will be determined through the City's annual budget development process.

1997 ■ City of Goodyear indicates that in the event that Maricopa County or the Arizona Department of Environmental Quality develops a rule with regionwide applicability, the City will consider implementing this measure. At this time, there is no legal definition of a "special event center". The City will explore the implementation of this measure after the legal definition of a special event center is developed by Maricopa County or the Arizona Department of Environmental Quality. The Public Works Department will be

responsible to explore the feasibility of implementing this measure. Funding will be determined through the City's annual budget process.

1997 ■ City of Mesa indicates that at this time there are a minimal number of large events in the City of Mesa. The City will continue to evaluate parking management and traffic control improvements for smaller special events.

Development of the ITS system may aid in the implementation of this measure. Mass Transit Alternatives (Measures 97-TC-1) and Expansion of Public Transportation Programs (Measure 97-TC-5) may result in increased funding for transit and ultimately help provide transit options for travel to activity centers. Without expansion of the current public transportation system, options of encouraging alternative transportation will be limited. Also see Measure 97-TC-10: Site Specific Transportation Control Measures. Coordination will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of Peoria indicates that this measure involves emission controls from special events resulting in parking and point source from vehicle and equipment. The type of controls are dependent upon the duration of the event and the anticipated number of participants. Events are categorized as either City sponsored or non-City sponsored events. Current staffing in the Community Services Department, Community Development Department, Police Department, and Public Services Department are utilized to implement the controls. Controls include dust preventative measures in paved and non-paved parking areas, and traffic control for large, short duration City sponsored events. The Community Services Department enforces the controls for the City sponsored events through coordination with other City departments. Non-City sponsored events are controlled through the Use Permit process administered by the Community Development Department by a series of conditions which stipulate dust and traffic control.

1997 ■ City of Phoenix is working with the public and private sector stakeholders to evaluate options for managing parking and traffic associated with activity centers and special events in the downtown area. The City has established a position for a temporary staff person with primary responsibility for developing a downtown parking program for City-owned parking facilities. The Coordinator will also work with City departments, the Downtown Phoenix Partnership. Cultural and sport venue management, downtown property owners, parking managers, and other stakeholders to address parking issues, to identify linkages to alternative modes of travel, and to consider the availability of public and private transportation services for these venues.

Mass Transit Alternatives (Measures 97-TC-1) and Expansion of Public Transportation Programs (Measure 97-TC-5) may result in increased funding for transit and ultimately help provide transit options for travel to activity centers. Without expansion of the current public transportation system, options of encouraging alternative transportation will be limited. Also see Measure 97-TC-10: Site Specific Transportation Control Measures.

Job responsibilities are currently assigned to an existing staff person. Recruitment for the Parking Management Coordinator is expected to be completed by July 1, 1997. Funding is allocated through the annual budget process. Temporary Parking Management Coordinator position (Estimated $85,000).

1997 ■ Town of Queen Creek does not have a large number of special events throughout the year. The Town, however, will include in the current special events application a requirement to obtain a Maricopa County dust permit. The Town estimates that ten (10) events would be affected by this measure with attendance which varies from 50 to 5,000.
It is expected that this measure will be implemented no later than January 1, 1998. Implementation would involve adding the requirement of a Maricopa County dust permit to the existing special events application. To implement the measure, the current Building Department staff would be adequate to check completed special event applications for a Maricopa County dust permit. Funding to implement this measure would be budgeted from the Town's General Fund.

1997 ■ City of Scottsdale evaluated traffic patterns before and during Super Bowl XXX, and programmed the signal computer to alleviate and avoid traffic predicaments.

The City of Scottsdale completed construction of two bridges associated with the Greenway/Hayden CAP crossing prior to the 1997 Phoenix Open to alleviate traffic congestion. The Phoenix Open is an annual event.

The City of Scottsdale Transportation Department's objective for 1997-1999 is to implement a traffic management program.

The City works with the Chamber of Commerce, public and private sector stakeholders to evaluate options for managing parking and traffic associated with activity centers and special events throughout Scottsdale.

Mass Transit Alternatives (Measure 97-TC-1) and Expansion of Public Transportation Programs (Measure 97-TC-5) may result in increased funding for transit and ultimately help provide transit options for travel to activity

centers. Without expansion of the current public transportation system, options of encouraging alternative transportation will be limited. Also see Measure 97-TC-10: Site Specific Transportation Control Measures.

Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Tempe indicates that this measure would require new and existing owners/operators of special event centers to reduce mobile source emissions generated by their events. A list of available strategies would be available that reduce mobile source emissions. The definition of "special event center" would be developed through the rule process.

The expanded transit system, as referenced in Measure 97-TC-5, will assist special event promoters in providing alternative transportation to special events. In addition, the City is continuing to study a special event traffic management system.

The Events Task Force, comprised of representatives from various city departments, currently reviews special event applications. The Task Force serves as the means to address event issues such as traffic and safety. This measure can be implemented upon definition of special event center and development of available strategies. Funding is provided through the annual budget process.

28. Voluntary Lawn Mower Emissions Reduction Program

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which requires Maricopa and Pima Counties to establish a Voluntary Lawn Mower Emissions Reduction Program to begin no later than July 1, 1998. A lawn mower owner may participate in the program if the lawn mower starts and is used for commercial or residential purposes. The voucher for retired commercial lawn mowers is $200 and must be used for the purchase of a lawn mower that generates lower emissions. The voucher for retired residential lawn mowers is $100 and must be used for the purchase of an electric lawn mower. Retired lawn mowers are prohibited from use in Arizona.

In order to fund this program, H.B. 2237 establishes the Voluntary Lawn Mower Emissions Reduction Fund consisting of monies appropriated by the Legislative and political subdivisions along with gifts, grants and donations. The Counties are required to prepare and submit a progress report on December 1 of each year which describes the number of lawn mowers retired by brand and year of manufacture; cost effectiveness of the program in terms of dollars spent per ton of emissions reductions; recommendations

for improving the effectiveness of the program; and administrative costs of the program (A.R.S. 49-474.02).

The bill also contains a $1,000,000 appropriation for the State General Fund for fiscal year 1997-1998 for deposit into the Voluntary Lawn Mower Emission Reduction Fund (Section 21 of H.B. 2237).

1998 In 1998, the Arizona Legislature passed S.B. 1427 which expanded the program to include garden equipment as well as lawn mowers. The bill specifies that a voucher will be issued in the amount of $50 to the owner of a gasoline powered lawn or garden device that is retired. The voucher must be used for the purchase of a lawn or garden device that generates lower emissions. Retired equipment is prohibited in the state. In addition to lawn mowers, the progress report due from the counties on December 1 of each year must include garden equipment. The bill also contains an appropriation of $500,000 in FY 1998-1999 and $500,000 in FY 1999-2000 (A.R.S. 49-474.02 and Section 36 of S.B. 1427).

1997 ■ Maricopa County indicates that this measure involves implementing a voluntary program to purchase and retire commercial and residential lawn mowers which produce excessive emissions. This measure will be implemented by the Maricopa County Environmental Services Department, Community Service Division. Legal Authority for this action is provided under Section 49-474.02 of the Arizona Revised Statutes.

The Maricopa County Community Services Division is currently in the developmental stages of program implementation.

July 1997, Define program parameters
July 1997, Develop RFP for Vendors
August 1997, Issue RFP for Vendors
October 1997, Select Vendor
October 1997, Finalize paperwork
November 1997, Program implementation

Personnel will be provide through existing staff. The sum of $1,000,000 has been appropriated from the state general fund to be split among counties with a population of more than 500,000 persons.

29. Off-Road Vehicle and Engine Standards

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which requires the Arizona Department of Environmental Quality to adopt rules for air pollution emission standards for off-road vehicles and engines marketed in the State beginning

with the 1999 model year. The standards may include the following categories:

f. Heavy duty Diesel vehicles rated at 175-750 horsepower.
g. Small utility and lawn and garden equipment engines rated at less than 25 horsepower.
h. Recreational vehicles rated at less than 25 horsepower.
i. Specialty engines and go-carts rated at greater than 25 horsepower.
j. Off-road motorcycles and all terrain vehicles.

The Arizona Department of Environmental Quality is also required to adopt air pollution emission standards for golf cart engines in Maricopa County (A.R.S. 49-542.04).

30. Encourage the Use of Temporary Electrical Power Lines Rather than Portable Generators at Construction Sites

1997 ■ City of Avondale would participate in program with the electrical utility companies and the Homebuilders Association to encourage the use of temporary construction power devices (meter socket receptacles) for construction sites. The receptacles connect to the power pole and eliminate the need for petroleum-powered generators. The reusable equipment is available through Arizona Public Service Company and Salt River Project Agricultural Improvement and Power District.

The City will assist with the creation and distribution of informational materials as appropriate. Public Works and Community Development Services Department staff will be familiar with the program and will encourage participation by developers and contractors. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Buckeye will encourage the use of temporary power by working with Arizona Public Service and contractors to consider the use of temporary power lines instead of portable generators. The Town's Building Safety Division is responsible for this measure. Legal Authority is provided by the adopted Uniform Electrical Code, adopted by the Town Council. This measure is already being implemented. Funding is provided through the Town's General Fund for Building Safety personnel.

1997 ■ Town of Carefree is a semi-rural community with approximately 2300 residents located on the north edge of the Phoenix metropolitan area. The average annual new residential construction is approximately 60 dwelling

units. The Town of Carefree, in conjunction with the Arizona Public Service Company, encourages the use of temporary power for new construction.

This measure will be implemented by the Town of Carefree. Legal authority for this action is provided under Section 9-270-A (14) of the Arizona Revised Statutes. The approval and encouragement of temporary electrical power for new construction is continual. The annual operating cost of the Town of Carefree Building and Safety Department is approximately $110,000. However, there is no additional cost to the Town in implementing this measure.

1997 ■ Town of Cave Creek will adopt requirements for all new construction to install Temporary Metered Power Outlet prior to pre-slab inspection. However, due to the remoteness of certain areas and the current backlog of the power company to hook up even primary services, this measure would not be attainable at all phases of construction but would be obtainable by 50 percent stage of construction. When primary power becomes available, Temporary Metered Power will be required by the Building Official.

1997 ■ City of El Mirage will work with other entities to encourage building contractors and developers to consider the use of temporary electrical power rather than portable generators, where appropriate. The City will work with other key partners, i.e., electrical utility companies, developer/builder associations and state and local governmental agencies to develop and/or distribute appropriate materials to encourage building contractors and developers to consider the use of temporary electrical power instead of portable generators. The City's Building Department is responsible for the implementation of this measure. Funding will be determined through the City's annual budget development process.

1997 ■ Town of Fountain Hills agrees to implement a program which encourages the use of Salt River Project ("SRP") temporary power devices at new construction sites. This measure is jointly implemented by the Town of Fountain Hills Building and Safety Department and SRP. Legal authority for this is provided under Arizona Revised Statutes Section 9-240-"General Powers of Council".

The Town of Fountain Hills Building and Safety Department currently encourages the use of "temporary power devices", however, the actual hook-up and monitoring is controlled and managed by SRP. The program began on January 1, 1997. There are no funds allocated for this measure from the Town of Fountain Hills budget. This measures does not represent an ordinance, regulation, or rule requiring enforcement. SRP manages and

enforces this "temporary power" program. All temporary power devices are installed and inspected by SRP personnel at the construction site.

1997 ■ Town of Gilbert indicates that homebuilders can choose to use SRP's Temporary Metered Power Outlet at subdivisions. The receptacles connect to the power pole and eliminate the need for petroleum-powered generators. The Town will assist with the creation and distribution of informational materials as appropriate. Building and Code Enforcement Department staff is familiar with the program and available to answer questions by developers and contractors. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale will work with other entities to encourage building contractors and developers to consider the use temporary electrical power rather than portable generators, where appropriate. The City will work with other key partners, e.g., electrical utility companies, developer/builder associations, and state and local governmental agencies to develop and/or distribute appropriate materials to encourage building contractors and developers to consider the use of temporary electrical power instead of portable generators. The City's Community Development Group is responsible for the implementation of this measure. Funding will be determined through the City's annual budget development process.

1997 ■ City of Goodyear will work with other entities to encourage building contractors and developers to consider the use of temporary electrical power rather than portable generators, where appropriate. The City will work with other key partners, e.g., electrical utility companies, developer/builder associations, and state and local governmental agencies to develop and/or distribute appropriate materials to encourage building contractors and developers to consider the use of temporary electrical power instead of petroleum powered generators. The City's Community Development Department is responsible for the implementation of this measure. Funding will be determined through the City's annual budget process.

1997 ■ City of Mesa has a program to facilitate installation of temporary power at any site within the City. The City will monitor the progress of a pilot program between electrical utility companies and the Homebuilders Association to encourage the use of temporary construction power pole and eliminate the need for petroleum-powered generators. The reusable equipment is available through the Salt River project Agricultural Improvement and Power District.

The City will assist with a regional effort to create and distribute informational materials as appropriate. The Building Inspection Department and the Environmental Division will be familiar with the program and will encourage participation by developers and contractors. Coordination and public education will be ongoing. Funding is allocated through the annual budget process.

1997 ■ Town of Paradise Valley indicates that the Town plans to include in it's requirements, the use of temporary electrical power during the construction process. This will be accomplished by the passing of Ordinance Number 445, prohibiting the use of gas generators at building sites unless temporary power is unavailable. Town of Paradise Valley Building Inspection Department. Implementation will be within the next calendar year. Funding is allocated through the Town's annual budget.

1997 ■ City of Peoria indicates that the use of temporary electrical power sources is a standard practice for commercial developers within the City of Peoria. Developers routinely connect to electrical source power rather than use portable generators and other portable equipment. Existing Off-Site and Building inspectors will be utilized.

1997 ■ City of Phoenix is participating in a pilot program with the electrical utility companies and the Homebuilders Association to encourage the use of temporary construction power devices (meter socket receptacles) for construction sites. The receptacles connect to the power pole and eliminate the need for petroleum-powered generators. The reusable equipment is available through Arizona Public Service Company and Slat River Project Agricultural Improvement and Power District.

The City will assist with the creation and distribution of informational materials as appropriate. Development Services Department staff will be familiar with the program and will encourage participation by developers and contractors. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Queen Creek will encourage homebuilders to arrange for installation of temporary power at construction sites by the local utility company. The number of housing units affected by this measure would be approximately six (6) per month. Commercial developments affected would be approximately one (1) per year.

It is expected that this measure will be implemented no later than January 1, 1998. Implementation would involve the addition of the SRP temporary power information packet to the existing materials that the

Building Department provides at building permit issuance. To implement the measure, the current Building Department staff would be adequate to encourage the use of temporary power. The funding to implement the measure would be budgeted from the Town's General Fund.

1997 ■ City of Scottsdale indicates that Arizona Public Service (APS) and Salt River Project (SRP) both have voluntary temporary construction power programs for residential construction. (See Attachments for details.)

The City of Scottsdale is cooperating with these voluntary programs in conjunctions with the electrical utility companies and the Homebuilders Association to encourage the use of temporary construction power devices (meter socket receptacles) for residential construction sites. The receptacles connect to the power pole and eliminate the need for petroleum-powered generators. The reusable equipment is available through Arizona Public Service Company (APS) and Salt River Project (SRP). Implementation is in progress. Staffing funding for inspection services is through the biennial budget process.

1997 ■ City of Tempe is implementing this measure by a change in the City's current Electric Code. When the change is completed, the City will work with the electrical utility companies, contractors, owners, and builders to encourage the use of temporary metered power outlets for construction sites. The temporary metered power outlets are connected to the building's electrical service pole and eliminate the need for petroleum-powered generators. The power outlets are available through Salt River Project and Arizona Public Service.

The City will assist with the creation and distribution of informational materials as appropriate. The Development Services Department staff will be familiar with the program and will encourage participation by developers and contractors. Implementation is in progress. Funding for Development Services is allocated through the annual budget process.

1997 ■ City of Tolleson Mayor and Council will adopt an ordinance requiring contractors to use temporary power lines only in those areas where it is fiscally and geographically possible. Developments not in close proximity to a permanent electrical power source will not be required to adhere to this measure. The Ordinance will be adopted by July, 1997. City of Tolleson Building Department Staff will fulfill the duties required for the proper implementation of this measure. Cost of $200 will be incurred for publication of said ordinance.

1997 ■ Maricopa County indicates that the emissions from the production of electrical power used in new home construction could be reduced substantially by the use of temporary electrical power rather than generators. Electrical service can usually be established within 30 days of the request. This voluntary measure would reduce noise as well as air pollution. Pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors), Maricopa County will hand out brochures, when issuing building or earthmoving permits, advising contractors of the availability of the program and appropriate contacts. Departments will obtain or design a handout in June 1997 and begin handing out the information to all permittee after July 1, 1997. Departments' permitting programs are ongoing and funded in the existing budget.

31. Defer Emissions Associated With Governmental Activities

1997 ■ City of Avondale indicates that the City uses 4-stroke lawnmowers and limits the use of 2-stroke lawn-care equipment wherever feasible. The City will consider options for a pilot program to evaluate electrical-powered lawn-care equipment as the battery technology becomes more feasible for large scale operations.

1997 ■ Town of Buckeye will evaluate ways to defer emissions associated with Town governmental activities during high pollution periods. The Town will evaluate new low or no emission lawn maintenance and other equipment when they become available for commercial use. The Town will look into establishing procurement standards which require bidders to provide information on substitute products with low or no-content reactive organic compounds in applicable procurement solicitations. Various Town Departments will be responsible for this measure. Legal authority for this action is provided under ARS 9-240, "General Powers of the Common Council". The Town's staff will periodically evaluate low or no emission lawn maintenance and other equipment as they become available for commercial use. Funding will be determined through the Town's annual budget process.

1997 ■ Town of Cave Creek indicates that wherever and whenever possible, the Town will schedule road construction and maintenance projects outside of the critical air pollution periods. Factors that would affect the Town's ability to re-schedule projects include the efficient use of equipment and manpower.

1997 ■ City of Chandler indicates that the City's Park Division has reduced the use of gas-powered blowers by limiting the number of days they can be used in the downtown colonnade area from five days per week to only one day per

week and by sweeping walks in lieu of using blowers in neighborhood parks when feasible. As contracts for maintenance of city-owned property are re-bid, the City will work with contractors to use cleaner-burning equipment; specifically, motors that comply with either "CARB 95" or "EPA Phase I" standards. The City's Public Works Department will replace worn-out two-cycle, gas-powered trimmers, chain saws, blowers, and lawn mowers with four-cycle equipment whenever possible. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of El Mirage will evaluate ways to defer emissions associated with City governmental activities during high pollution periods. The City will evaluate new low or no emission lawn and garden equipment when they become available for commercial use or when feasible. The City will look into establishing procurement standards which requires bidders to provide information on substitute products with low or no-content of reactive organic compounds in all applicable procurement solicitations.

The City's Parks Maintenance and Streets Department will periodically evaluate low or no emission lawn and garden equipment as they become available for commercial use. Funding will be determined through the City's annual budget development process.

1997 ■ Town of Gilbert, wherever feasible, will reduce activities in the Nonattainment Area that may contribute to seasonal air quality problems. Outside painting activities will be avoided during the summer months. The Town uses 4-stroke lawnmowers and limits the use of 2-stroke lawn-care equipment wherever feasible. The Town will consider options for a pilot program to evaluate electrical-powered lawn-care equipment as the battery technology becomes more feasible for large scale operations. The Town will continue to use employee newsletters or other communication tools to encourage employees to limit engine idling, reduce driving, and to avoid activities which may contribute to air pollution or to schedule activities in a manner to avoid peak pollution periods. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale will evaluate ways to defer emissions associated with City governmental activities during high pollution periods. The City will evaluate new low or no emission lawn and garden equipment when they become available for commercial use or when feasible. The City will explore the possibility of modifying its landscape maintenance contracts to encourage the use of low or no emissions lawn and garden equipment when existing contracts expire. The City has established procurement standards which requires bidders to provide information on substitute products with low or no-content of reactive organic compounds in all applicable procurement solicitations.

The City's Park Maintenance Division and Right of Way Division will periodically evaluate low or no emission lawn and garden equipment as they become available for commercial use and explore the possibility of modifying landscape service contracts when existing contracts expire. City landscape maintenance crews currently do not use two-cycle engine lawnmowers. The City is currently requesting substitute products with low or no-content of reactive organic compounds in all applicable procurement solicitations. Funding will be determined through the City's annual budget development process.

1997 ■ City of Goodyear will evaluate ways to defer emissions associated with City governmental activities during high pollution periods. The City will evaluate new low or no emission lawn and garden equipment when they become available for commercial use or when feasible. The City will explore the possibility of modifying its landscape maintenance contracts to encourage the use of low or no emissions lawn and garden equipment when contracted work is required. The City will establish procurement standards which will require bidders to provide information on substitute projects with low or no content or reactive organic compounds in all applicable procurement solicitations.

The City's Park Maintenance Division and Right-of-Way Division will periodically evaluate low or no emission lawn and garden equipment as they become available for commercial use and explore the possibility of modifying landscape service contracts when existing contracts expire. Funding will be determined through the City's annual budget development process.

1997 ■ City of Mesa has been working with lawncare contractors to utilize cleaner burning equipment; specifically, motors that comply with either "CARB 95" or "EPA Phase I" standards. The City has developed a pilot program to require the use of equipment that meets either the CARB or EPA standards. As part of this program, two lawncare contractors have committed to using only the cleaner burning equipment for City projects after August 1997. Based on the results of the pilot program, the City will determine if the program can be expanded to all contractors beginning January 1, 1998.

The City is continuing to evaluate the feasibility of restricting the use of or limiting the hours of usage for lawncare and other gasoline powered equipment on City property. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ Town of Paradise Valley will use the Trip Reduction Program's communication to encourage employees to limit engine idling, reduce driving, and to avoid activities which may contribute to air pollution or to schedule activities in a manner to avoid peak pollution periods. This measure will be included in the annual Trip Reduction Program to be revised and submitted

to the Maricopa County Trip Reduction Agency in November of 1997. A full-time exempt employee volunteers their services on off hours, at a cost of zero. The annual budget for this measure is from the Town's General Fund. Development and administration of the Trip Reduction Program Reduction Plan requires staff time equivalent to 0.20.

1997 ■ City of Phoenix, in 1997, established standard text to be included in City contracts which requires vendors to provide information on the amount of reactive organic compounds in their products and information on substitute products which contain either non-reactive or low-reactive organic compounds. Outside painting activity will be avoided during the summer months whenever feasible.

The City uses 4-stroke lawnmowers and limits the use of 2-stroke lawncare equipment wherever feasible. The City will consider options for a pilot program to evaluate electrical-powered lawncare equipment as the battery technology become more feasible for large scale operations.

The City will continue to use employee newsletters or other communication tools to encourage employees to limit engine idling, reduce driving, and to avoid activities which may contribute to air pollution or to schedule activities in a manner to avoid peak pollution periods.

1997 ■ City of Scottsdale Procurement Guidelines restrict purchase of certain chemicals, including some VOC products. City operational units defer certain painting and street striping operations whenever feasible. The City of Scottsdale Community Maintenance and Recreation Department no longer uses gas-powered leaf blowers to maintain landscaping in the Civic Center Mall. Various options including vacuum-brooming and use of electric powered equipment have been piloted.

City contracts with landscape maintenance companies for the Civic Center Mall prohibit use of gas-powered leaf blowers. City contract for cleaning and maintenance of Scottsdale Stadium prohibit use of gas-powered leaf blowers (except for six (6) select dates during the year). The City now purchases 4-stroke lawnmowers to replace older mowers. The City will consider options for a pilot program to evaluate alternatively powered lawncare equipment, including hydrogen powered and electric powered equipment.

The City will continue to use employee newsletters or other communication tools to encourage employees to limit engine idling, reduce driving, and to avoid activities which may contribute to air pollution or to schedule activities in a manner to avoid peak pollution periods. Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Surprise indicates that this measure involves limiting use or idling of Public Works vehicles or utility equipment and minimizing the use of two-cycle gasoline-powered lawn and garden maintenance equipment after 2:00 p.m. during the winter carbon monoxide season (October 1 through March 31). This measure will be implemented by the City of Surprise Public Works Department. Commitment to begin during the 1998 winter carbon monoxide season.

1997 ■ City of Tempe indicates that this measure involves shifting or postponing certain emission activities during critical air pollution periods.

- During the summer ozone season, the City will: prioritize and reschedule painting, metal coating, refinishing, and other VOC (Volatile Organic Compounds) emitting activities; restrict the use of 2-cycle gasoline-powered lawn and garden equipment, with no use allowed after 4:00 p.m; encourage the use of hand and electric equipment; stagger the time of day for refueling to avoid heavy emissions all at once, and; include in all procurement solicitations for VOC-containing products a request for a substitute product with a lower or no VOC content.

- During the winter CO (Carbon Monoxide) season, City personnel are asked: to minimize the use of 2-cycle gasoline-powered lawn and garden equipment after 2:00 p.m.; avoid idling vehicles or utility equipment; and schedule street construction and maintenance projects that disrupt traffic flow during the summer months, when feasible. In the downtown area, the City has committed to clean sidewalks four times a week. To use manpower efficiently, gas blowers are used in the early morning hours, 3:30 a.m. to 6:00 a.m.

Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Wickenburg indicates that this measure involves limiting the use of idling of Public Works vehicles or utility equipment and minimizing the use of 2-cycle gasoline-powered lawn and garden maintenance equipment after 2:00 p.m. during the winter carbon monoxide season (October 1st through March 31st). An attempt will be made to operate this program during the winter months between October 1st and March 31st.

1997 ■ Town of Youngtown indicates that the Youngtown Police Department has implemented a four day, ten hour work week. This practice would stagger personnel schedules; thus decreasing Town vehicle usage. This program

is currently in operation. No additional personnel or funding is required by the implementation.

1997 ■ Maricopa County indicates that this measure is aimed at reducing activities where feasible and appropriate, by State agencies and local governments in the Nonattainment Area that may contribute to seasonal air quality problems. This measure would involve a shift in the timing of activities or postponement altogether, until after critical air pollution periods.

Pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors) and the contracting authority set forth in A.R.S. Section 11-201(A), Maricopa County commits to insert a provision into the bid specifications for landscape maintenance to encourage the use of new lawnmower equipment meeting the EPA Phase I specifications, require the use of 4-cycle engines on gasoline powered lawnmower equipment, or restrict the use of 2-cycle equipment after 2:00 p.m. during the winter carbon monoxide season. The provision also states that should smaller 4-cycle engines become available on hand held lawn equipment (weed eaters, vacuums/blowers, etc.) contractors will be required to utilize such equipment.

Maricopa County is in the process of selecting a contractor to perform landscaping services.

May 1997	Finalize bid specifications
June 1997	Call for bids
August 1997	Award contract

Ongoing program funded through existing County budget.

1997 ■ Arizona Department of Transportation indicated that this measure is directed at reducing some activities by State Agencies and local governments where feasible and appropriate in the Nonattainment Area that may contribute to carbon monoxide air quality problems. This measure will require an internal policy and will be an ongoing effort.

A formal policy will be developed by the ADOT General Operations Group to limit the use or idling of utility equipment and to minimize the use of 2-cycle gasoline-powered lawn and garden maintenance after 2:00 p.m. during the carbon monoxide season. No additional funding or employees would be required to implement this measure. Associated costs are covered by the ADOT administrative budget.

1997 ■ Regional Public Transportation Authority indicates that the RPTA will reduce activities where feasible and appropriate that may contribute to seasonal air quality problems. This would involve a shift in the timing of activities or postponement altogether, until after critical air pollution periods. RPTA will:

- encourage and ask contractors, employees, and over 1,250 employer-clients to reschedule painting and refinishing and other VOC emitting activities to occur outside of the summer months whenever feasible;
- include in procurement solicitations for VOC-containing commodities a request for substitute products with lower or no VOC content;
- limit use of idling of vehicles during the winter carbon monoxide season;
- encourage contractors and over 1,250 employer clients to minimize use of 2-cycle gas powered lawn equipment, go electric or use manual equipment, and to limit use after 2 p.m. in the winter. RPTA will work with the ADEQ and MAG, who are co-sponsors of the Clean Air Campaign, in dissemination of information on the above activities.

  Summers/ongoing: seasonal activities to reduce emissions will be disseminated via HPA advisories, articles, fact sheets, internal E-mail, letters, etc.
  Winters/ongoing: seasonal activities to reduce emissions will be disseminated via HPA advisories, articles, fact sheets, internal E-mail, letters to contractors, etc.

No additional funding or personnel is required to disseminate this information.

32. Clean Burning Fireplace Ordinances

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to adopt, implement and enforce an ordinance that complies with the clean burning fireplace standards adopted by the Metropolitan Planning Organization that is responsible for air quality planning in Area A by December 31, 1998. The ordinance must prohibit the installation or construction of a fireplace or wood stove unless it is one of the following:

1. A fireplace that has a permanently installed gas or electric log insert.

2. A fireplace, a wood stove or any other solid fuel burning appliance that is any of the following:

(a) Certified by the U.S. Environmental Protection Agency as in compliance with 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

(b) A wood stove tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those in 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

(c) Determined by the County Air Quality Control Officer to meet performance standards equivalent to those in 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

3. A fireplace that has a permanently installed wood stove insert that complies with paragraph 2, subdivision (a), (b) or (c) of this section.

The ordinance is required to prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. The ordinance may provide for exemptions from regulation for heating or industrial equipment, cooking devices and outdoor fireplaces. The state income tax subtraction of $500 dollars for the purchase and installation of a qualified wood stove, wood fireplace or gas fired fireplace and non-optional equipment is removed. The subtraction of $500 dollars for the conversion of an existing wood fireplace to a qualified fireplace is retained.

A county that contains any portion of Area A that has a population of less than 1,200,000 according to the most recent U.S. decennial census shall adopt, implement, and enforce the ordinance only in those portions of the county which are located in Area A (A.R.S. 9-500.16 and 11-875).

1999 ■ City of Avondale indicates that this measure involves the use of clean burning fireplaces based on the MAG Regional Council Clean Burning Fireplace Standards for new construction and Senate Bill 1427. The City of Avondale will adopt the Clean Burning Fireplace Ordinance prior to July 30, 1999 so that the effective date of the ordinance is July 30, 1999. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permanent fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875).

This measure will be implemented by the City of Avondale Community Development Department. Legal authority for this action is provided under Senate Bill 1427 and a new City ordinance. The schedule for implementing

this measure will be that prior to July 30, 1999, an ordinance that meets the MAG Regional Council approved Clean Burning Fireplace Standard for new construction with an effective date of July 30, 1999 or earlier will be adopted. There will be no increase in staff necessary for the implementation of this ordinance. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree, on September 1, 1998, adopted an ordinance prohibiting the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance includes the requirements listed in Arizona Senate Bill 1427 (1998) and the MAG Clean Burning Fireplace Standard, dated October 23, 1997. The Town of Carefree Ordinance No. 98-14 becomes law thirty days after adoption. Ordinance No. 98-14 will be enforced by the Building Department staff. Legal authority is provided by Town ordinances and State statutes.

1998 ■ City of Chandler commits to adopt an ordinance designed to ensure that as new fireplaces are built, they will not be contributing to increased air pollution problems. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. This ordinance will include the state requirements listed in the S.B. 1427, Laws 1998, Chapter 217 and the MAG Clean Burning Fireplace Standard, dated October 23, 1997. City of Chandler, Planning and Development Department, Development Services Division will be responsible for implementation. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council and A.R.S. 9-500.16, Clean Burning Fireplace Ordinance. Implementation will begin upon the effective date of the ordinance, January 1, 1999, and will be ongoing. Funding is allocated through the annual budget process.

1998 ■ City of El Mirage commits to adopt an ordinance designed to ensure that as new fireplaces are built, they will not be contributing to increased air pollution problems. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. This ordinance will include the state requirements listed in the Arizona Senate Bill 1427 (1998) and the MAG Clean Burning Fireplace Standard, dated October 23, 1997. The City of El Mirage has approximately 100 existing fireplaces and anticipates 10 built per year in future construction. The ordinance will be implemented by the City of El Mirage. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.16, Clean Burning

Fireplace Ordinance, as created under Senate Bill 1427. In accordance with A.R.S. 9-500.16, the ordinance must be developed, adopted, and implementation by December 31, 1998. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Council, and A.R.S. 9-500.16, Clean Burning Fireplace Ordinance, as created under Senate Bill 1427.

1998 ■ Town of Fountain Hills commits to adopt an ordinance designed to ensure that as new fireplaces are built, they will not be contributing to increased air pollution problems. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. This ordinance will include the state requirements listed in the Arizona Senate Bill 1427 (1998) and the MAG Clean Burning Fireplace Standard, dated October 23, 1997.

The ordinance will be implemented by the Town of Fountain Hills. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.16, Clean Burning Fireplace Ordinance, as created under Senate Bill 1427. In accordance with A.R.S. 9-500.16, the ordinance must be developed, adopted, and implemented by December 31, 1998.

1998 ■ Town of Gilbert indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County Nonattainment Area to adopt, implement, and enforce an ordinance that complies with the Metropolitan Organization's clean burning fireplace standards by December 31, 1998, (A.R.S., Section 9-500.16). In December of 1997, the Town of Gilbert adopted Town Ordinance 1066, which prohibits: (1) the installation or construction of a fireplace or wood stove unless it is clean burning; and (2) the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use.

This measure will be implemented by the Town of Gilbert Code Enforcement Department. Legal authority for this action is provided under A.R.S., Section 9-240 General Powers of Common Council. The effective date for the Town's clean-burning fireplace ordinance is January 1, 1999. This measure will be implemented by existing personnel and funding will be allocated through the annual budget process. The ordinance will be enforced by the Town's Code Enforcement Department.

1998 ■ City of Glendale indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County

Nonattainment Area to adopt, implement, and enforce an ordinance that complies with the clean burning fireplace standards by December 31, 1998. The ordinance prohibits the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance also prohibits the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875).

The City of Glendale's Building Safety Department is responsible for recommending changes to the City ordinances relating to new fireplace construction. Legal authority for this measure is provided under A.R.S. 9-240, General Powers of Common Council and the Glendale Charter. The City of Glendale will adopt a clean burning fireplace ordinance by December 31, 1998. The City of Glendale will implement and enforce the ordinance starting in 1999. The City of Glendale's Building Safety Department is adequately staffed to implement and enforce this measure. The City of Glendale's Building Safety Department will enforce this measure through its construction permit process.

1998 ■ City of Goodyear indicates that this measure involves the use of clean burning fireplaces based on the MAG Regional Council Clean Burning Fireplace Standards for new construction and Senate Bill 1427. The City of Goodyear will adopt the Clean Burning Fireplace Ordinance prior to December 31, 1998 so that the effective date of the ordinance is December 31, 1998. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The Ordinance will also prohibit the subsequent conversion or alteration of a permanent fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875).

This measure will be implemented by the City of Goodyear Community Development Department. Legal authority for this action is provided under Senate Bill 1427 and a new City ordinance. The schedule for implementing this measure will be that prior to December 31, 1998, an ordinance meets the MAG Regional Council approved Clean Burning Fireplace Standard for new construction with an effective data of December 31, 1998 or earlier will be adopted. There will be no increase in staff necessary for the implementation of this ordinance. City administration will oversee the implementation of this measure.

1999 ■ City of Mesa indicates that the City passed the Clean Burning Fireplace Ordinance (No. 3434) on February 2, 1998 that meets the requirements of S.B. 1427 (1998) for clean burning fireplaces. The ordinances prohibits the installation or construction of a fireplace or wood stove unless it meets the clean burning requirements, and it prohibits the conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. The ordinance

includes a penalty provision of fines not to exceed $2,500.00 and six months imprisonment for persons, and fines not to exceed $20,000.00 for firms or corporations.

The Building Inspections Division (BID) is responsible for issuing building permits for all new construction. Permits will not be issued after December 31, 1998 to any facility where the building plans indicate the installation of a nonclean burning fireplace. The BID is also responsible for inspecting new construction prior to approving it for occupancy. Certificates of Occupancy will not be issued to a facility where a nonclean burning fireplace has been installed in violation of Ordinance 3434. Implementation authority is found in: A.R.S., Section 9-240 General Powers of Councils; Mesa City Charter, Article I: Powers of the City; Mesa City Code, Section 4-1-2: Fireplace Restrictions; Mesa City Code, Section 4-9-1: Uniform Administrative Code.

The Ordinance has been adopted and will prohibit the installation of non-approved fireplaces on or after December 31, 1998. Funding is allocated through the annual budget process to fund staff positions in BID. The Building Inspections Division will enforce the clean burning fireplace requirements beginning December 31, 1998.

1998 ■ Town of Paradise Valley indicates that this measure involves an ordinance that requires all new fireplaces to conform to MAG standards. This measure is being implemented by the Town of Paradise Valley Community Development Department. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Common Council. The ordinance was adopted on December 18, 1997. The Town of Paradise Valley will use its two full time building inspectors and one assistant planner to ensure compliance. The Town Administration will oversee the implementation of this measure.

1998 ■ City of Peoria indicates that this measure involves the use of clean burning fireplaces based on the MAG Regional Council Clean Burning Fireplace Standards for new construction and Senate Bill 1427. The City of Peoria will adopt the Clean Burning Fireplace Ordinance prior to December 31, 1998 so that the effective date of the ordinance is December 31, 1998. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permanent fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875).

This measure will be implemented by the City of Peoria Building Safety Division. Legal authority for this action is provided under Senate Bill 1427 and a new City ordinance. The schedule for implementing this measure will

be that prior to December 31, 1998, an ordinance that meets the MAG Regional Council approved Clean Burning Fireplace Standard for New Construction with an effective date of December 31, 1998 or earlier will be adopted. There will be no increase in staff necessary for the implementation of this ordinance. The City administration will oversee the implementation of this measure.

1998 ■ City of Phoenix indicates that in December 1997, the City of Phoenix adopted Ordinance G-4062, which amends the City Code to prohibit the installation or construction of a fireplace or wood stove unless the appliance is "clean burning". This ordinance allows permanently installed electric or natural gas fireplace inserts, EPA-approved appliances, or other appliances which have been determined to be "as-clean-as" the EPA approved appliances, or other appliances (as determined by the Maricopa County Air Pollution Control Officer). The ordinance also prohibits the removal of a gas or electric log insert or wood stove insert from a fireplace for the purpose of converting the fireplace to directly burn wood or other solid fuel.

City of Phoenix, Development Services Department is responsible for enforcing the Ordinance through building permits. Authority for implementation includes: A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated; Ordinance G-4062 which creates Phoenix City Code, Chapter 40, Environmental Protection; and Article I: Fireplace Restrictions.

The Ordinance is effective on December 31, 1998. Funding for implementation of the City's Building Code enforcement program is allocated through the annual budget process. The Ordinance will be enforced through the City's Building Permit process.

1998 ■ Town of Queen Creek indicates that this measure involves the adoption of an ordinance to prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. It also must prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. Senate Bill 1427 mandates this measure.

The Town of Queen Creek Building Department will implement this measure. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council. As required by S.B. 1427, the Clean Burning Fireplace Ordinance will be adopted, implemented and enforced by December 31, 1998. The current Engineering and Building Department staff would be adequate to implement this measure. Funding to implement this

measure would be budgeted from the Town's General Fund. The enforcement of this measure would be the responsibility of the Building Department. During the plan review phase of the building permit process, the plan reviewer will check for compliance with the Clean Burning Fireplace Ordinance.

1998 ■ City of Scottsdale indicates that this measure is intended to prohibit installation and/or construction of residential wood burning fireplaces unless they are clean burning. The City of Scottsdale participated in the process, which led to the development of a regional model fireplace ordinance. On December 1, 1997, the Scottsdale City Council passed Ordinance No. 3095 Clean Burning Fireplaces. The ordinance takes effect January 1, 1999. This ordinance is regarded as a Best Available Control Measure (BACM) for fireplace particulate emissions.

Subsequently, State law adopted May 29, 1998 in the 1998 legislative session requires cities and towns located in the Maricopa County Nonattainment Area to adopt, implement, and enforce an ordinance that complies with the Clean Burning Fireplace Standards by December 31, 1998. The ordinance prohibits the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance also prohibits the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875). The previously passed Scottsdale ordinance meets these requirements.

The City of Scottsdale Community Development Department is responsible for implementing the City ordinances relating to new fireplace construction. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council. The City of Scottsdale Ordinance No. 3095 Clean Burning Fireplaces takes effect on January 1, 1999. The City of Scottsdale Community Development Department is adequately staffed to implement and enforce this measure. The City of Scottsdale Community Development Department will enforce this measure through its building permit process.

1998 ■ City of Surprise commits to review adoption of an ordinance designed to ensure that as new fireplaces are built, they will not be contributing to increased air pollution problems. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. This ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. This ordinance will include the state requirements listed in Arizona Senate Bill 1427 (1998) and the MAG Clean Burning Fireplace Standard, dated October 23, 1997.

The ordinance will be implemented by the City of Surprise. Legal authority for this action will be provided under A.R.S. Sections 9-240, 9-276, and 9-500.16. In accordance with A.R.S. 9-500.16, the ordinance must be developed, adopted, and implemented by December 31, 1998. Legal authority for this action will be provided under A.R.S. Sections 9-240, 9-276, and 9-500.16.

1998 ■ City of Tempe indicates that State law adopted in the 1998 legislative session requires each city and town located in the Maricopa County Nonattainment Area to adopt, implement, and enforce an ordinance that complies with the Clean Burning Fireplace Standards by December 31, 1998. The ordinance will prohibit the installation or construction of a fire place or wood stove unless it is clean burning. This ordinance also prohibits the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use (A.R.S. 9-500.16 and 11-875).

City of Tempe Ordinance No. 97-67 pertaining to clean burning fireplaces was adopted on December 11, 1997. The implementing City Department is the Development Services Department. Authority for implementation includes A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation will begin January 1, 1999. Funding is provided through the annual budget process.

1998 ■ City of Tolleson commits to adopt a clean burning fireplace ordinance that complies with the standards set forth in Senate Bill 1427. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use.

The City of Tolleson Safety Services Department will implement and monitor this measure. Authority to enforce this ordinance will be granted by the Tolleson City Council via A.R.S. 9-240, General Powers of Council. The future ordinance addressing this measure will be adopted and implemented no later than December 31, 1998. Three full-time Safety Services Department employees are assigned to enforce any and all ordinances pertaining to housing development. Funding for implementation is strictly based on the salaries of these employees as well as the cost for administrative support.

Enforcement of the future ordinance will begin at all initial meetings with housing developers. At these meetings, developers will be made aware of the requirements of this ordinance. Furthermore, no site plan shall be approved before total compliance with all City of Tolleson ordinances, including the Clean Burning Fireplace Ordinance, is made evident within

such plans. Intermittent spot inspections will be made, before, during and after construction to ensure compliance with said ordinance. Any violation of this future ordinance will result in the issuance of a citation by code enforcement officials. Safety Services Building Inspectors will perform inspections at will to ensure compliance and report any violations, as well as any action taken against violators, to the Zoning Administrator (City Manager).

1998 ■ Town of Youngtown commits to adopt an ordinance designed to ensure that as new fireplaces are built, they will not be contributing to increased air pollution problems. The ordinance will prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance will also prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. This ordinance will include the state requirements listed in the Arizona Senate Bill 1427 (1998) and the MAG Clean Burning Fireplace Standard, dated October 23, 1997. The Town of Youngtown has approximately ten existing fireplaces and anticipates two built per year in future construction.

The ordinance will be implemented by the Town of Youngtown. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.16, Clean Burning Fireplace Ordinance, as created under Senate Bill 1427. In accordance with A.R.S. 9-500.16, the ordinance must be developed, adopted, and implemented by December 31, 1998. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.16, Clean Burning Fireplace Ordinance, as created under Senate Bill 1427. The Town of Youngtown Building Safety Department will track the progress made with the implementation of this measure.

1999 ■ Maricopa County, in 1999, indicates that this measure involves amending Section 3102 of the Uniform Building Code to include the MAG Model Clean Burning Fireplace Standard. S.B. 1427 passed by the Arizona Legislature requires cities, towns and counties in Area A to adopt, implement, and enforce an ordinance that complies with the clean burning fireplace standards adopted by the Metropolitan Planning Organization in Area A by December 31, 1998. The ordinance must prohibit the installation or construction of a fireplace or wood stove unless it is clean burning. The ordinance is also required to prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use (A.R.S. 11-875).

Maricopa County under A.R.S. 11-875 is mandated to adopt, implement, and enforce an ordinance that complies with the clean burning fireplace

standards and additionally from its authority to adopt and enforce code provisions under A.R.S. 11-861 and 11-863. A new code provision was adopted by the Board on December 16, 1998.

Funding is provided by existing Planning and Development through the code amendment process and with normal plan review/building inspection staffing enforcement of the Building Code following adoption of the amendment. The Planning and Development Department will enforce the program through its authority to issue building permits. No permits will be issued unless the device(s) proposed for installation meets the requirements of the Clean Burning Fireplace building code amendment. The Building and Safety Division will not grant a clearance for final inspection sign-off until the fireplace meets the requirements of the Clean Burning Fireplace building code amendment.

33. Public Information Program on Wood Stoves and Wood Heat

1997 ■ Maricopa County indicates that this measure involves establishing a public information and education program to inform and educate citizens about relevant State, local and EPA regulations; general health risks of wood smoke; proper woodburning operations and maintenance; heating fuels and practices; new technology stoves; and alternatives to wood heating. The program is supported by two hotlines; fax notifications of high air pollution advisories to media, agencies and major employers; prepared information sheets for handouts, mailers and bill stuffers; and local newspaper articles (32 published during the 1996-1997 winter season).

Pursuant to A.R.S. Section 11-871, Maricopa County developed and implemented a residential woodburning restriction ordinance in October 1994. The Board of Supervisors authorized the Environmental Services Department to carry out the necessary investigations, inspections, and enforcement for County Air Pollution Control pursuant to A.R.S. Section 49-473. To support the residential woodburning restriction ordinance, the Department has developed a Public Information Program to inform and educate the public pursuant to the County's authorities under A.R.S. Section 11-201, 11-202 and 11-251.

To enhance the program, Maricopa County is completing the following actions:

1. In February 1997 published a Woodburning Booklet as part of Maricopa County Pollution Prevention Program. The Woodburning booklet is being distributed to the public and to the media and is available on the Department's Home Page.

2. In Winter 1996 completed an educational brochure to inform new home buyers about High Air Pollution advisories and to promote clean-burning fireplaces working with the Air Quality Committee of the Phoenix Environmental Quality Commission, the Homebuilders Association and the Hearth Products Association. The brochure is being distributed in model homes and by realtors and home builders throughout Maricopa County.

3. Beginning the winter season 1996-1997, Maricopa County in conjunction with RPTA designed a uniform symbol for high air pollution advisory days which is displayed during the weather reports on all except one of the major network affiliate stations. In addition, the local public television station also began running a "crawl" which appears at the bottom of the television screen announcing high air pollution advisories.

4. By August 1997, high air pollution advisories will appear on Maricopa County Environmental Services Home Page, ADOT's Home Page and RPTA's Home Page which is also linked to the Environmental Section of the Arizona Republic's Home Page. The National Weather Service agreed to include tips with its broadcast wire service air quality report on high air pollution advisory days beginning with the 1996 winter CO season.

The Department designates approximately $30,000 of its Federal 105 grant for the woodburning program including both public information and enforcement. The public involvement coordinator spends one quarter of her time from October to March on this program.

1997 ■ Regional Public Transportation Authority indicates that the RPTA provides information to the public regarding wood stoves and the no burn ordinance to reduce wintertime emissions of carbon monoxide. Information is disseminated through High Pollution Advisories to over 700 Valley employers via facsimile during both winter and summer high pollution seasons. Periodically, articles are written in employer newsletters and/or employee newsletters (made available in camera ready form to employers for duplication) on the importance of oxygenated fuels. RPTA provides information materials to the over 1,250 employers affected by the TRP that represent about 585,000 employees and students. Maricopa County is responsible for educating the public about the No Burn Day ordinance and wood stoves. RPTA works with the County to provide information to employers and residents.

- Fax to over 700 employers on High Pollution Advisory Days, on No Burn.
- Distribute fact sheets when made available by Maricopa County kits to 1,250 employers - Fall, 1997.
- Ongoing-disseminate information as requested by Maricopa County.

No additional funding or personnel is necessary to provide periodic information to residents.

34. Encourage Limitations on Vehicle Idling

1997 ■ Regional Public Transportation Authority updated its engine idling policy in June 1996. The updated policy provides that vehicle operators shall follow the accompanying guidelines on engine idling at layovers, unless actively loading or unloading wheelchair passengers (certain exceptions may apply).

1. Below 90 degrees and over 3 minutes layover, turn engine off.
2. Below 90 degrees and within 100 yards of any single- or multi-family residence, regardless of layover time, turn engine off.
3. Any time the temperature is between 90 and 99 degrees, allow engine to run at low idle.
4. Any time temperature is 100 degrees or higher, allow engine to run at high idle.

The Regional Public Transportation Authority working in cooperation with its member jurisdictions. The RPTA will continue to work with member jurisdictions to promote environmentally sensitive transit operations practices and policies. Promoting vehicle idling limitations and other environmentally sensitive transit operations practices and policies are included within the ongoing annual budgets of the RPTA and its member jurisdictions.

35. Expansion of Area A Boundaries

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which expands the boundaries of Area A. Previously, the Area A boundaries followed the boundaries of the carbon monoxide and ozone nonattainment area. Area A was expanded to include additional portions of Maricopa County, portions of Pinal County, and portions of Yavapai County. The Area A boundaries are delineated as follows:

(a) In Maricopa County:
Township 8 North, Range 2 East and Range 3 East
Township 7 North, Range 2 West Through Range 5 East
Township 6 North, Range 2 West Through Range 6 East
Township 5 North, Range 2 West Through Range 7 East

Township 4 North, Range 2 West Through Range 8 East
Township 3 North, Range 2 West Through Range 8 East
Township 2 North, Range 2 West Through Range 8 East
Township 1 North, Range 2 West Through Range 7 East
Township 1 South, Range 2 West Through Range 7 East
Township 2 South, Range 2 West Through Range 7 East

(b) In Pinal County:
Township 1 North, Range 8 East And Range 9 East
Township 1 South, Range 8 East And Range 9 East
Township 2 South, Range 8 East And Range 9 East
Township 3 South, Range 7 East Through Range 9 East

(C) In Yavapai County:
Township 7 North, Range 1 East And Range 1 West Through Range 2 West

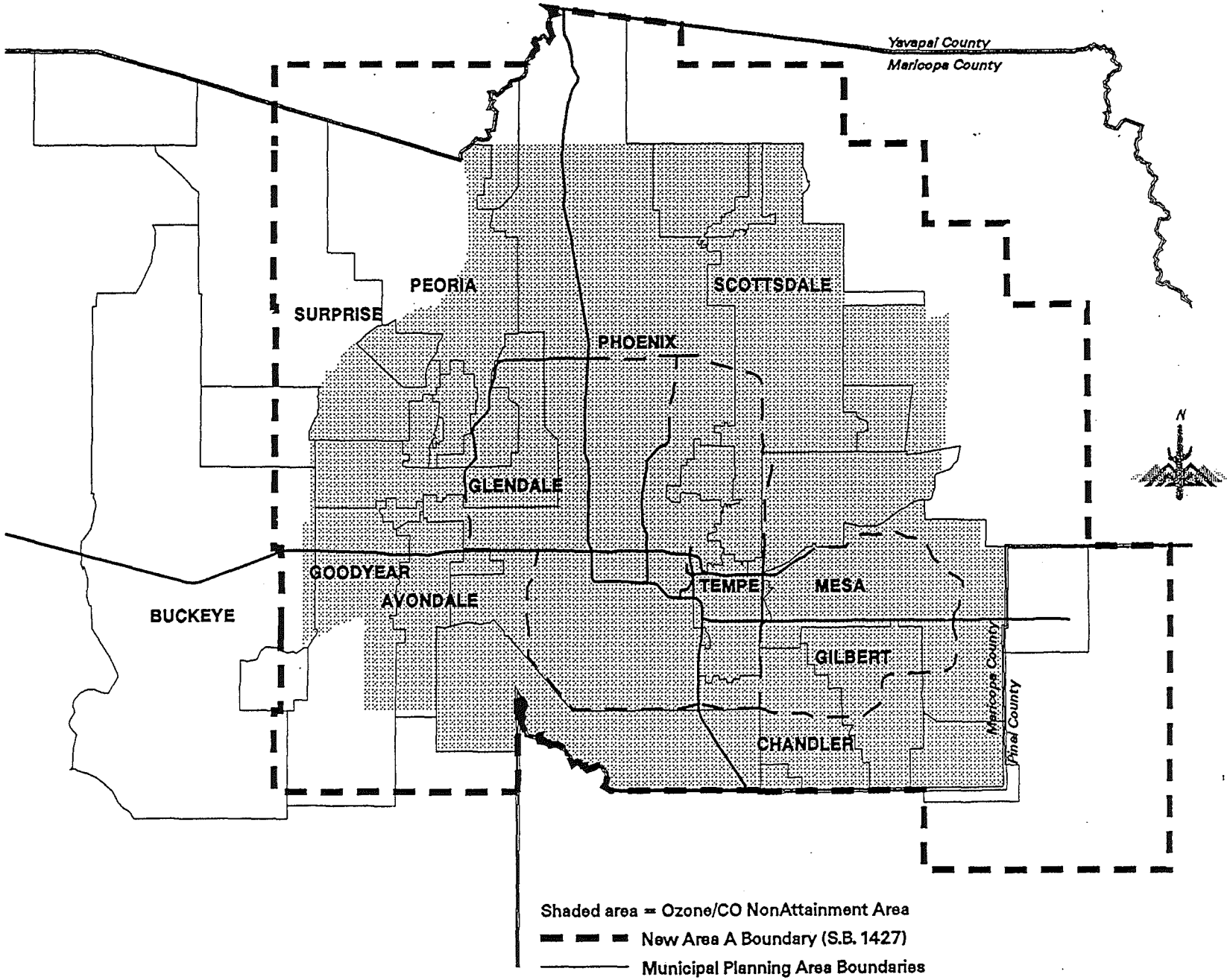
The Area A map is provided in Figure 7-1. The Area A expanded boundaries are also depicted with the PM-10 nonattainment area boundaries in Figure 7-2.

All of the air quality measures and programs added or modified by S.B. 1427 for Area A will be effective from and after December 31, 2000 in the portion of Area A which includes Pinal County. This does not apply to the conversions of fleet vehicles to alternative fuels by cities, counties, and school districts. Also, the vehicles subject to the Vehicle Emissions Inspection Program that have been included within the new boundaries of Area A are required to comply beginning from and after December 31, 1998. Collectively, the air quality measures which apply specifically to Area A are: Traffic Synchronization; Plans to Stabilize Targeted Unpaved Roads, Alleys, and Stabilize Unpaved Shoulders on Targeted Arterials; Crack Seal Equipment; Alternative Fuel Vehicles Requirements for Local Governments and School Districts; Adjusted Work Hours; Clean Burning Fireplace Ordinances; Use of Petroleum Products for Road Maintenance; Winter Fuel Reformulation: California Phase 2 Reformulated Gasoline with 3.5 Percent Oxygen Content by Weight; Stage I and II Vapor Recovery; Voluntary Vehicle Repair and Retrofit Program; Vehicle Emissions Testing Program Requirements (including Catalyst Replacement Program and Vehicle Repair Grant Program); Tougher Enforcement of Vehicle Registration and Emissions Test Compliance; Remote Sensing, and Travel Reduction Program (A.R.S. 49-541 and Section 41 and 42 of S.B. 1427).

OZONE/CO NONATTAINMENT AREA & NEW AREA A BOUNDARIES

FIGURE 7-1

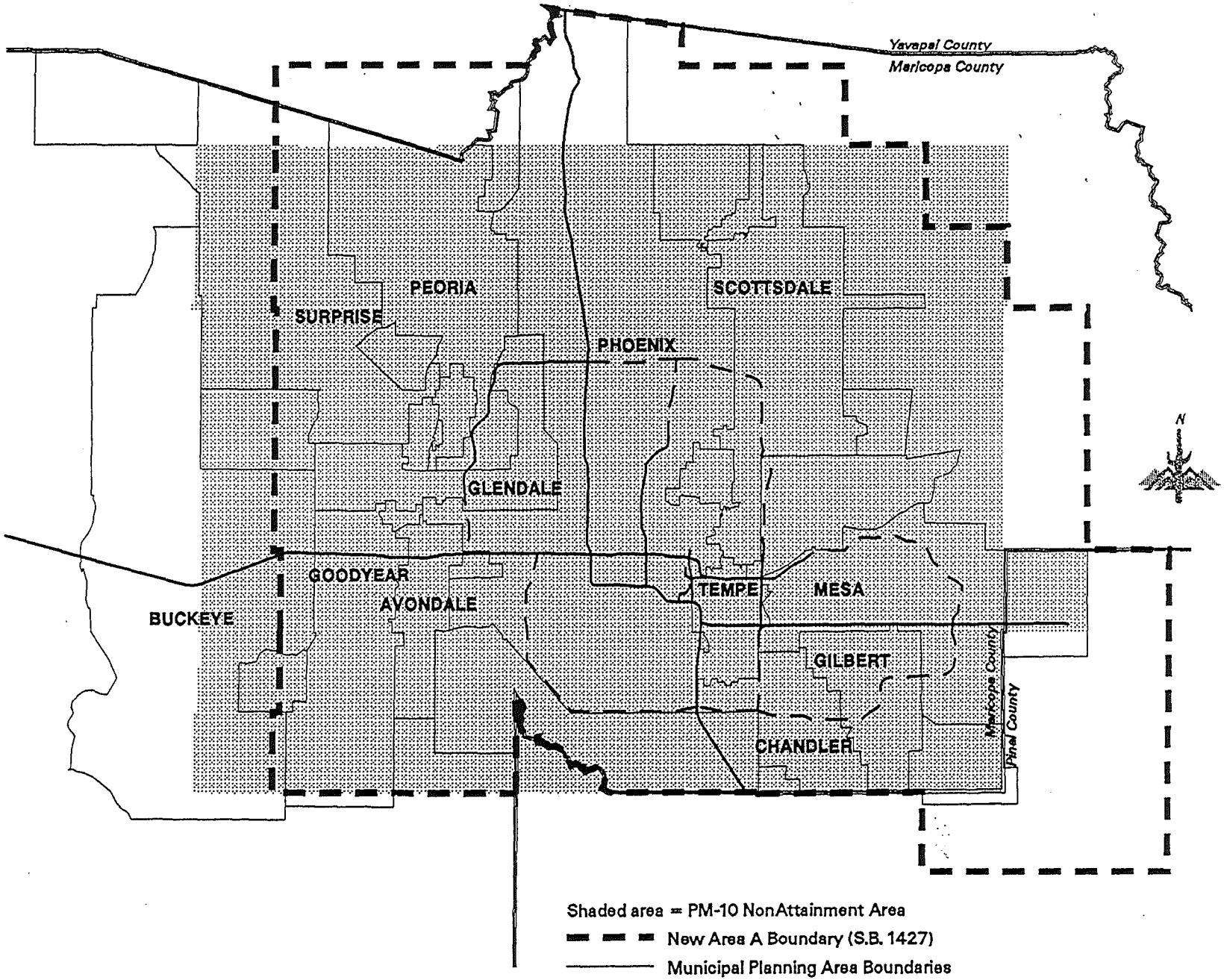
MARICOPA ASSOCIATION of GOVERNMENTS



PM-10 NONATTAINMENT AREA AND NEW AREA A BOUNDARIES

FIGURE 7-2

MARICOPA ASSOCIATION of GOVERNMENTS



aq/areaapm May, 1998

36. Voluntary No-Drive Days

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which changes the Voluntary No Drive Days Program from a winter-time program to a year round program. Maricopa and Pima Counties are required to implement the program (A.R.S. 49-506).

37. Analysis of Intersource Credit Trading and Banking Program

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which appropriated $75,000 from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 for the analysis of the environmental and economic feasibility of an intersource credit trading and banking program in Arizona for emission sources within the same nonattainment area, maintenance area, or modeling domain. In order to demonstrate environmental feasibility within a nonattainment area, maintenance area, or modeling domain, all emissions trading actions must result in overall reductions in total emissions within the same nonattainment area, maintenance area, or modeling domain. The general fund appropriation must be matched by an equal expenditure of monies from gifts, grants, or donations or the general fund monies revert to the State General Fund by the end of the fiscal year (Section 39 of S.B. 1427).

38. PM-10 Best Available Control Technology (BACT) Determinations for Stationary Sources

1997 ■ Maricopa County indicates that this measure involves an industry-by-industry study of the major point sources that could be made to determine the best types of control technologies that are available to yield emission reductions.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer, and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Most stationary sources already have BACT controls. In analyzing the sources, incremental benefits may be obtained from revising Rule 316--

Nonmetallic Mineral Mining and Processing. Several provisions need to be clarified to improve its effectiveness.

The Department also considered requiring baghouses in place of cyclones on woodworking operations. However, some facilities already use baghouses. None of the woodworking facilities are major sources for PM-10. With countywide emissions estimated to be 0.24 tons per day of PM-10, this source category would not be considered a significant source category. This measure would result in emission reductions of approximately 0.20 tons of PM-10 per day from woodworking operations. In conclusion, the administrative burden of developing a rule is not justified at this time for such a minimal emission reduction.

May--August	Research and draft revision
September--October 1997	Workshop draft revision
November--December 1997	Consideration by Board of Supervisors

Maricopa County Environmental Services Department has 16 inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. The department's annual revenue for the air quality program is approximately $2.6 million.

39. Strengthening and Better Enforcement of Fugitive Dust Control Rules

1999 ■ Maricopa County, revised 1999 commitment, indicates that this measure involves achieving improved compliance with existing air pollution rules through the provision of additional inspection and enforcement personnel. In addition, it involves evaluating the effectiveness of rules and improving clarity.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Implementation Schedule: Implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development

and performance measures. Specific commitments are described below: staffing under the caption, "Level of Personnel and Funding", the enforcement plan commitments are described under the caption, "Enforcement Program", and performance measures are described under the caption, "Monitoring Program".

Public Outreach/Education:

August 1998	Began offering Dust Control Training Course at Paradise Valley Community College
January 1, 1999	Earth Moving Permit Application Forms, Dust Control Plan Forms and "Pollution Prevention Guide for Construction" available on Web page
January - September 1999	Coordinated with EPA on notifications to vacant lot owners, unpaved parking lot owners, and cities and towns
December 1999 - January 2000	Train inspection staff on case development
February 2000	Complete staff training manual containing checklists for documentation of important observations for citations. The checklists will include records review and describe appropriate actions regarding recordkeeping.
January - March 2000	Complete draft manual for government construction oversight - Initial project due from ASU sponsored by the partnership between MCESD, ADOT, MCDOT, ASU and private industry.
March 2000	Complete staff training on revised rule test methods.
November 2000	Meet with city staff and train city staff to prepare inspection reports and notices of violations based on MCESD staff training manual.

Increase Inspection Frequency Part I--Sources Not Requiring a Permit:

June 1999	Board adopted Rule 310.01 that addressed vacant lots, unpaved parking lots and public unpaved roads.
April 2000	Develop inspection priorities for vacant lot and unpaved parking lot inspections considering lot size and number of sources. Larger lots will be inspected first and smaller lots in succeeding years. Department resources will be directed initially to areas that lack municipal programs.
January 2000	Department obtains copies of local government plans developed pursuant to A.R.S. Section 9-500.04 or 49-474.01 to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials.
Annually thereafter	Review reports filed on those plans

Inspection Frequency Part II--Sources Requiring Permits:

June 1997	Scheduled weekend inspections randomly at least once a month.
July 1999	Proactively inspect sites larger than 10 acres 3 to 6 times per year. Proactively inspect sites less than 10 acres once within 30 days of project start date listed on the permit application form.
January 2000	Develop inspection priorities for permitted sources
March 2000	Revise Standard Operating Procedure and checklists for fugitive dust inspections to be consistent with revised rules.
March 2000	Provide a shortened complaint response time with a goal of 8 hours for high priority complaints. Maintain the current goal of 24 hours for all others.

September 2000	Conduct mid-year review of program to evaluate its progress and future needs.
September - January 2001	Draft Fugitive Dust Operating Plan to track progress and identify future needs.
March 2001	Review program to evaluate its effectiveness and potential future needs.
<u>Evaluate and Revise Rule 310</u>:	
December 1999 - February 2000	Revise earth moving application forms and dust control plans to be consistent with the revised rule and to improve program effectiveness.
December 1999 - July 2001	Research and develop a standard(s) and test method(s) for earth moving sources, considering field research sponsored by EPA, designed to be enforceable and meet BACM requirements as to stringency and the number of sources that it applies to. If research reveals problems with the existing opacity standard's enforceability, feasibility or stringency for some or all earthmoving operations, revise rule by June-September 2001 to modify the existing opacity test method to address the problems as warranted and adopt a new standard(s) and test method(s) to deal with any problems that cannot be addressed by modifying the opacity test method.
January 2000 - July 2001	Research, develop and incorporate additional requirement for dust suppression practices/equipment into dust control plans and/or Rule 310 by June - September 2001.
June 2000 - June 2001	Revise the sample daily recordkeeping logs for new and renewed Rule 310 permits to be consistent with rule revisions and to provide sufficient detail documenting the implementation of dust

	control measures required by Rule 310 and contained in the dust control plan. Distribute sample log sheets with issued permits and conduct outreach to sources by June 2000.
January - February 2001	Draft rule revisions, if necessary
March - May 2001	Workshop draft rule, if rule revisions are necessary
June - September 2001	Board consideration of rule revision, if necessary

Level of Personnel and Funding:

Manpower: In 1998, the Department moved three additional inspectors and an enforcement officer from other positions to work proactively and directly on the earth-moving program. As a result of a fee increase adopted by the Board on August 19, 1998, these positions will be permanently funded. In addition, the increase allowed the Department to add another inspector spring 1999 and three additional inspectors, a coordinator, an aide and an enforcement officer during the current fiscal year. By the end of January 2000, these additions will increase personnel working directly and proactively on the program to eight inspectors, one coordinator, one supervisor, an aide and two enforcement officers.

The Department is seeking approval to hire an additional attorney in the County Attorney's Office to expedite civil litigation and to assist with prosecuting Class One Misdemeanor cases by April 2000. Upon approval of this item, the funding will be available to initiate the hiring process through the County Attorney's Office. The Department will also provide an additional FTE to the Small Business Environmental Assistance Program to assist smaller builders and construction companies, and to help develop and implement additional education programs for this industry group. The Department also has 19 inspectors, aides, engineers, and supervisors who are available to monitor compliance at previously permitted facilities, perform field observations and respond to complaints as needed.

Funding: Maricopa County Environmental Service Department's annual revenue for the air quality program is anticipated to be approximately $3.85 million. The annual earth moving permit fee revenue is anticipated to be approximately $1,123,000. This represents an increase of $772,000 over existing program revenue.

Enforcement Program: These requirements are administered through a visual inspection program and/or a permit program which includes review of permit, inspection of facilities, performance of compliance test methods and review of

records and activities. The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. The actual process is further described in the Department's Air Enforcement Policy.

February 2000	Draft revised enforcement policy that includes: • guidelines for initiating various enforcement actions • guidelines for reinspection • defines the timely and appropriate action by laying out guidelines for which type of violation is appropriate for specific enforcement actions and for the timeframes for escalating enforcement actions when appropriate • identify high priority violations • guidelines for when to seek penalties reflecting the economic benefit of non-compliance, if feasible • guidelines for seeking and determining higher penalties, when appropriate, for repeat violations of the same nature • guidelines for inspectors to handle predetermined citation category violations from observance of a violation to citation delivery to justice court
February 2000	Draft checklists for training manual for field staff to ensure that observations are documented that are important to make the citation program successful.
April 2000	Finalize revised enforcement policy

Monitoring Program: The Department will track the number of inspections, number and type of enforcement actions, amount of penalties assessed, amount of penalties collected, compliance with the 24-hour and annual PM-10 standard and number of educational opportunities provided. In 2003-2004, the Department will perform a rule effectiveness study to evaluate this program.

40. Reduce Particulate Emissions from Unpaved Roads and Alleys

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to develop and implement plans to

stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans are required to address performance goals, criteria for targeting the roads, alleys and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

1999 ■ City of Avondale will participate in a regional program to assist in the reduction of particulate pollution. The City intends to by September 30, 1999, provide dust proof treatments to any public street within a nonattainment area which is unpaved or for which the Public Works Director has not approved alternate dust control or graveling measures. These roads will be subject to paving or other stabilizing treatment for that portion of the streets which is a benefit to the owner of the adjacent property.

The City will also develop a plan and identify all unpaved public roads for stabilizing or paving. The plan will include performance goals, criteria for identifying those roads, alleys, and shoulders, and present a schedule for implementation including funding options and if necessary, or when necessary report the plan to the Maricopa Association of Governments.

This measure will be implemented by the City of Avondale Public Works Department. Legal authority for this action is provided under Section 9-240 "General Powers of Common Council" of the Arizona Revised Statutes. The City of Avondale Public Works Department will prepare the necessary plans and financial options as mentioned above. The Public Works Department will be responsible for exploring the feasibility of implementing this measure. Funding will be determined through the City's annual budget process. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree has three miles of unpaved roads. The roads are graveled and receive less than an average daily trip volume of 150 vehicles. All road shoulders within the Town of Carefree are paved or graveled. The Town of Carefree Subdivision Ordinance requires new roads and shoulders within the Town of Carefree to be paved with asphalt, concrete, or the equivalent including gravel. The town Street Department staff will maintain the roads and funds are budgeted in the Street Department maintenance budget. The Town of Carefree will oversee the maintenance of its roads and enforcement of its ordinances.

1998 ■ Town of Cave Creek will participate in a regional program to assist in the reduction of particulate emissions. The Town began dustproof treatment of public streets in 1996 and by 1998 has accepted all unpaved public streets into a dust control program. By the end of 1998, over ten miles of unimproved dirt roads have been improved to include application of recycled asphalt or gravel (ABC) mixed and bound with lignosulfonate, a

dust palliative. All remaining dirt roads receive the dust palliative during regularly scheduled grading cycles.

This measure has been implemented by the Town of Cave Creek Engineering/Public Works Department and approved by the Common Council of the Town of Cave Creek through the budgeting process. The Town of Cave Creek Engineering/Public Works Department will continue to improve and dustproof all public roads within the limitations of available funding and budget. The Public Works Department, exclusive of Engineering, consists of one Public Works Foreman and four workers. All personnel are involved in dust proofing and road improvements. Future funding will be determined through the Town's annual budget process. The Town administration will oversee the implementation program. The Town administration will track the progress made with the implementation of this measure.

1998 ■ City of Chandler currently has four sections of city-owned unpaved public roadway within its corporate boundaries totaling approximately 1.25 miles. Travel on all but one to these sections is below a 250 average daily trip (ADT) level. There are also four sections of county-operated, unpaved public roadway within the corporate boundaries for which the City has no jurisdictional authority. Additionally, there are approximately five miles of unpaved privately-owned roads which allow public access. All of these privately-owned roads are believed to be under the 250 ADT level.

There are approximately 130 miles of city-owned alleys. Over the past four years the City has applied asphalt milling to 31 miles of city-owned alleys. The City commits to apply asphalt millings to another five to seven miles in the next 12 months, based on the availability of the milling material. Also, over the past four years, the City has reconstructed 7.5 miles of alleys, using six inches of ABC gravel for the base and surface material.

The City usually requires street improvements to be made when development or redevelopment occurs. Although the data generated by the microscale study demonstrates that the primary source of PM-10 emissions is agricultural activity over which the City has no control, and that unpaved roads are a very small contributor to exceedances of the 24-hour standard in Chandler, the City will commit to paving all city-owned public roads identified above by June 10, 2000 regardless of whether or not there is development activity along those sections of road or of the level of travel on these roadways. Additionally, the City will continue its program of dustproofing city-owned alleys.

The City will also commit to developing and implementing a plan by January 1, 2000 to stabilize unpaved roads and alleys that have not already been addressed. The plans will address performance goals,

criteria for targeting the streets and alleys, a schedule for implementation, funding options and reporting requirements.

These commitments do not apply to unpaved roads and alleys located on an industrial facility, or construction or earth-moving activity on sites that have an approved permit issued by Maricopa County.

City of Chandler, Public Works Department, Streets Division will be responsible for implementation. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council and A.R.S. 9-500.04, Air Quality Control; Definition; Chandler City Code 24A-3, Street financing policy; and Chandler City Code 24A-4, Scalloped Street Assessments. Implementation will be ongoing. Funding is allocated through the annual budget process.

1998 ■ City of El Mirage indicates that the following represents the City plan for reducing particulate emissions from unpaved roads. In Fiscal Year 1997-98, the City of El Mirage plans to pave one-half mile of currently unpaved roadways. The project is proposed to be funded through the ESP Grant Program of the Arizona Department of Commerce. The City is currently responsible for the maintenance of approximately six miles of unpaved roadways within a large lot rural subdivision. The City will propose to the property owners within this subdivision, that they consent to the formation of a City sponsored improvement district to pave all roadways within this subdivision. The currently unpaved one-quarter mile long roadway to the City's Wastewater Treatment Plant will be paved in 1999, as part of the project to expand the plant.

The above plan addresses 95 percent of all unpaved City roadways. The above plan by the City meets or exceeds the suggested measures for particulate emission controls suggested by MAG in the letter dated September 9, 1997. No further action is proposed. This plan will be implemented by the City of El Mirage Public Works Department. Legal authority of this action is provided under Section 9-240 of the Arizona Revised Statutes. Enforcement of this measure will be provided by the City Engineer.

1998 ■ Town of Fountain Hills commits to developing and implementing a plan that requires unpaved roads and alleys to be stabilized to reduce particulate emissions from vehicles traveling over an unpaved surface. Owners/operators of existing public unpaved roads with average daily trip volumes of 250 vehicles or greater within the boundaries of Fountain Hills will be required to pave, chemically stabilize, or apply gravel to the unpaved road. Requirements for the plan are included in A.R.S. 9-500.4(A)(3) as created by Arizona Senate Bill 1427 (1998).

Approximately 2.4 ± miles of unpaved roads and alleys (.15 mile-roads, 2.25 miles-alleys) will be evaluated and begin to be treated by January 1, 2000, continuing as needed, using dust proofing techniques approved by EPA and/or MAG.

The plan will be implemented by the Town of Fountain Hills. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. Plans to stabilize targeted unpaved roads and alleys having greater than 250 vehicles per day need to be developed and begin to be implemented by January 1, 2000. The short span of public road (.15 mile) is scheduled to be asphalt paved per Town standards during Fiscal Year 1998-1999 (ending June 30, 1999). The Town of Fountain Hills, per the subdivision ordinance, requires developers to provide new paved streets with concrete curbs within all subdivisions and including perimeter streets. (Reference: Subdivision Ordinance, Article IV — Public Improvements Requirements 404(A), Adopted by Town Council October 3, 1996). No additional personnel is expected to be required. Funding is approved within the Fiscal Year 1998-1999 budget for paving the unpaved road segment; however, funding for stabilizing the unpaved alleys is undetermined. The Town of Fountain Hills Engineering and Street Maintenance Departments will be responsible for enforcing this measure.

1997 ■ Town of Gilbert, in 1997, indicates that all existing Town arterial and collector streets in the public street system are paved. There is approximately 1.25 miles of local single-lane streets that are unpaved, but stabilized with milled asphalt, which is regraded and watered on a monthly basis. Average daily traffic does not exceed 120 cars. This measure will be implemented by the Town of Gilbert, Public Works Street Section. Authority for implementation is A.R.S. Section 9-240: General Powers of Councils and Gilbert Town Code. Implementation will be ongoing. The Street Section maintains the approximately 1.25 miles on a monthly basis. The Town commits $500 in maintenance costs per mile on a monthly basis. Funding for this measure comes from the Town of Gilbert's Highway User Revenue Fund and is allocated through the annual budget process.

1998 Town of Gilbert, in 1998, indicates that State law adopted in the 1998 legislative session requires cities, towns, and counties located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted roads and alleys beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, and alleys, a schedule for implementation, funding options and reporting requirements (A.R.S., Section 9-500.04 and 49-474.01). In addition, the

proposed Environmental Protection Agency's Moderate Area PM-10 Federal Implementation Plan includes requirements for public unpaved roads.

All existing Town arterial and collector streets in the public street system are paved. Approximately 1.25 miles of local single-lane streets are unpaved and stabilized with milled asphalt. The average daily traffic on these roads does not exceed 120 cars. Approximately 1.25 miles of unpaved alleys existing under the Town's jurisdiction are also stabilized with milled asphalt. The Town's unpaved roads and alleys are watered and regraded on a quarterly basis.

The Town of Gilbert will prepare and implement a formal plan for the stabilization of its unpaved public roads and alleys to adhere to the State law. Legal authority for this action is provided under A.R.S., Section 9-240: General Powers of Common Council. The Town of Gilbert will continue to stabilize the 1.25 miles of unpaved public roads and 1.25 miles of unpaved public alleys within its jurisdiction. The plan mandated by State legislation will be developed and implemented by January 1, 2000. The Town's Streets Section is responsible for the repair and maintenance of Town streets and alleys. The Town commits $500 in maintenance costs per mile on a monthly basis. Funding for this measure comes from the Towns's Highway User Revenue Fund and is allocated through the annual budget process. The Town's Public Works Department will ensure that a plan is developed and the stabilization of Town unpaved roads and alleys is continued.

1997 ■ City of Glendale, in 1997, indicates that all existing City arterial and collector streets currently in the public street system are already paved. There exists approximately 3/4 mile of local single-lane streets serving approximately six residences that are unpaved, but stabilized with gravel. In the event that the City gains possession of existing unpaved arterial streets, the City will have those streets paved in a timely manner. The City has a general nuisance ordinance (Chapter 25, Nuisances, Section 2) that could be used to control activities on private property that causes dust problems to the prejudice, danger or annoyance of others.

The City's Engineering Department is responsible for the projects constructed within the city, including the design and construction of city streets and for the implementation of the City's public street improvement program. The City's Streets Division is responsible for the repair and maintenance of the City's streets and paved surfaces. The City's Code Compliance Division is responsible for the enforcement of the City Code. Legal authority for this section is provided under Section 9-240, General Powers of Common Council of the Arizona Revised Statutes. Funding

will be determined through the City's annual budget development process. The City's Code Compliance Division will enforce City Code 25-2 on a complaint basis.

1998 City of Glendale, in 1998, indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterial streets beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, alleys and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

The City will prepare and implement a plan to adhere to State law and the Clean Air Act. Legal authority for this measure is provided under A.R.S., Section 9-240, General Powers of Common Council and the Glendale Charter. The City will prepare a plan to reduce particulate emissions from public unpaved roads. The City will start to implement this Best Available Control Measure before January 1, 2000. The City's Streets Division is responsible for the repair and maintenance of city streets and alleys. The Streets Division is adequately staffed and funded to implement this measure. The City's Deputy City Manger of Public Works will ensure that the City implements this measure.

1998 ■ City of Goodyear will participate in a regional program to assist in the reduction of particulate pollution. The City intends to by April 30, 1999, provide dust proof treatments to any public street within a nonattainment area which is unpaved or for which the Public Works Director has not approved alternate dust control or graveling measures. These roads will be subject to paving or other stabilizing treatment for that portion of the street which is a benefit to the owner of the adjacent property. The City will also be required to post 15 mph speed limit signs on all private access ways as determined by the Public Works Director. The Public Works Department will post all unpaved roads for 15 mph, private or public. The City will also develop a plan and identify all unpaved public roads for stabilizing or paving. The plan will include performance goals, criteria for identifying those roads, alleys, and shoulders, and present a schedule for implementation including funding options and if necessary, or when necessary report the plan to the Maricopa Association of Governments.

This measure will be implemented by the City of Goodyear Public Works Department. Legal authority for this action is provided under Section 9-240, General Powers of Common Council of Arizona Revised Statutes. The City of Goodyear Public Works Department will prepare the

necessary plans and financial options as mentioned above. The Public Works Department will be responsible for exploring the feasibility of implementing this measure. Funding will be determined through the City's annual budget process. City administration will oversee the implementation of this measure.

1997 ■ City of Mesa, in 1997, indicates that the City began a dustproofing program using recycled asphalt with a surface sealer on unpaved public streets within the City in 1994. Since then 9.5 miles of unpaved streets with an average daily traffic volume of 120 vehicles or greater have been dustproofed. One additional mile is scheduled for 1997-1998 at an estimated cost of approximately $300,000.

At the current time, there is only 0.5 mile of unpaved street with an ADT of 120 which is located in the Lehi area of the City. There is an additional approximately 1.5 miles of unpaved streets in this area with an ADT of less than 120 vehicles. The dirt streets located in the Lehi area are subject to flooding and standing water due to poor drainage in the entire area. The installation of a storm drainage system is cost prohibitive due to the small area that it would serve. Without a properly designed and constructed drainage system, it is not reasonable to dustproof the dirt streets in this area as it would exacerbate the flooding and standing water problem.

The remaining 5.5 miles of unpaved City streets have estimated average daily traffic volumes less than 120 vehicles. The City will monitor the dust generating potential of these streets if there is additional development resulting in increased average daily traffic and will prioritize dustproofing needs for the remaining unpaved areas. City staff will include approximately one additional mile of dustproofing per year in the annual budget for Council consideration.

As new residential, commercial or industrial areas are developed paving and curbing is required under City Code 9-6-4 and 9-8-3. The City of Mesa will continue working with citizens to form special improvement districts to pave unpaved traffic surfaces. The City will also work with and encourage other governmental agencies within Maricopa County to have the State law revised to allow the governing body to reject Improvement District protests when the proposed Improvement District is related to air quality.

The City will evaluate the legality and feasibility of installing 15 mph traffic signs on unpaved roads. Generally, the State reserves the right to establish speed limits under A.R.S., Section 28-626 Uniform Application

of Laws. Throughout the State and A.R.S. Title 28, Article 6: Speed Restriction.

The Engineering Division will continue to develop plans for special improvement districts as they are identified. The Transportation Department is responsible for paving city streets. The Code Compliance Division is responsible for responding to complaints and enforcing City Code provisions. The Environmental Programs Division will be taking a proactive approach to working with private and commercial facility owners and operators to reduce fugitive dust emissions.

Implementation authority is found in: A.R.S., Section 9-240, General Powers of Councils; Maricopa County Rule 310, Open Fugitive Dust; Mesa City Charter, Article I - Powers of the City; and Mesa City Code, Section 9-6-4, and Section 9-8-3.

Implementation will be ongoing. Funding is allocated through the annual budget process. Approximately $300,000 is budgeted for one mile of dustproofing in the 1997-1998 budget. Approximately $300,000 will be included in future proposed budgets for Council consideration until the remaining unpaved streets with ADT of 120 vehicles have been dust-proofed.

The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1999

City of Mesa, in 1999, indicates that State law adopted in the 1998 legislative session (Senate Bill 1427) requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans must address performance goals; criteria for targeting the roads, alleys and shoulders; a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04). The plan will include the elimination or privatization of alleys whenever possible. The City of Mesa has previously committed to a program to reduce emissions from unpaved roads (Measure 97-DC-7) submitted to MAG in December 1997). The City will prepare and implement the additional plan required under State law.

The City of Mesa Transportation Division is responsible for paving and dustproofing City streets and alleys and evaluating effective dust

suppressants. The Environmental Programs Division will work with the Transportation Division to develop an inventory and prioritization of unpaved roads and alleys and to develop a plan in compliance with the requirements of A.R.S. 9-500.04.

Implementation authority is found in: A.R.S., Section 9-240: General Powers of Councils; Mesa City Charter, Article I - Powers of the City; and Mesa City Code, Section 9-6-4 and Section 9-8-3.

Implementation will be ongoing. Funding is allocated through the annual budget process. The City has previously committed to including approximately $300,000 in future proposed budgets for Council consideration until any unpaved streets with average daily trips (ADT) of 120 vehicles have been dustproofed.

1998 ■ Town of Paradise Valley indicates that this measure involves the continued implementation of the current ordinance which requires all public streets to be paved. This measure will be implemented by the Town of Paradise Valley Public Works Department. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Common Council. There are presently no unpaved public streets or alleys in the Town of Paradise Valley with ADT in excess of 150. At least one of these streets will be paved not later than June 10, 2000. The Town of Paradise Valley Public Works Department has 14 employees and an annual budget of $1,015,000. The Town Administration will oversee the implementation of this measure.

1997 ■ City of Peoria, in 1997, indicates that the City will proceed with a good faith effort to implement all or part of the measure to reduce particulate emissions from unpaved roads. The measure options include: Option 1: Applying dustproofing measures to existing unpaved roads above a specified average daily traffic. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Signage limiting vehicle speed to 15 mph on existing unpaved roads.

1998 City of Peoria, in 1998, indicates that the City of Peoria Code, Section 23-81, specifies that on or after March 31, 2000 any public street within a nonattainment area which is unpaved or for which the Public Works Director has not approved alternate dust control or graveling measures, will be subject to paving or other stabilizing treatment for that portion of the street which is a specific benefit to the owner of the adjacent property.

City Ordinance 98-20, after March 31, 2000 will also require the posting of 15 mph speed limit signs on all private access ways as determined by the Public Works Director. The City will amend the ordinance to allow the

Public Works Director to post all unpaved roads for 15 mph, private or public.

By January 1, 1999, the City will develop a plan and identify all unpaved public roads for stabilizing or paving. The plan will include performance goals, criteria for identifying those roads, alleys, and shoulders and present a schedule for implementation including funding options and if necessary, or when necessary, report the plan to Maricopa Association of Governments.

The City has identified 8.4 centerline miles of unpaved public roads and 3.3 miles of quasi-public roads (where the City has partial right-of-way and provide courtesy grading).

This measure will be implemented by the City of Peoria Public Works Department. Legal authority is Peoria Code Section 23-81 and Senate Bill 1427. The City of Peoria Public Works Department will prepare the necessary plans and financial options as mentioned above by January 1, 1999. There will be no increase in staff necessary for the implementation. The cost to provide dust control (3 inch ABC) is $760,000, or $65,000 per centerline mile. The City administration will oversee the implementation of this measure.

1997 ■ City of Phoenix, in 1997, indicates the measures which the City of Phoenix intends to implement to address particulate emissions from unpaved roads are defined in Resolution #18949 as approved by the Phoenix City Council on July 2, 1997. The measures summarized below were defined in the Resolution under Measures 97-DC-4 and 97-DC-99.

Installation of pavement and curbs for existing unpaved roads are accomplished through Improvement Districts. The maximum single family residential property owner's assessment for the high PM-10 area of the City was lowered from a $40/front foot to $20 in 1992. In 1997, the City Council allocated $500,000 of existing highway user revenues for a pilot project to lower the assessment to $10 per front foot as a further incentive to pave streets. This program is targeted for the areas where PM-10 concentrations are the highest.

The 1997-1998 Budget includes $300,000 for paving or stabilization of other unpaved roads and shoulders.

The City Code requires that all new roads serving multi-family, commercial and industrial development include paving, curbs and driveways consistent with municipal standards. Paving with curb and gutter is required for new roads.

The State reserves the right to establish speed limits under A.R.S. Section 28-626 Uniform Application of Laws Throughout the State and A.R.S. Title 28, Article 6: Speed Restrictions. City speed limits are consistent with those prescribed under this State law.

City of Phoenix, Street Transportation Department is the implementing City Department. Authority for implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; A.R.S., Section 28-626: Uniform Application of Laws Throughout State; A.R.S., Section 28-627: Powers of Local Authorities; A.R.S., Section 28-703: Alteration of Speed Limits by Local Authorities; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities; Phoenix City Code, Chapter 36, Article III, Section 36-42; Speed Limits; Phoenix City Code, Chapter 32, Article II, Section 32-33: Street and Utility Improvement Requirements.

1997-1998 road paving and stabilization projects are scheduled to begin this fiscal year. Resolution #18949, Measure 97-DC-99 includes the personnel and funding for these measures: the 1997-1998 budget includes $500,000 for the Improvement District pilot project; $300,000 for paving roads and shoulders.

1998

City of Phoenix, in 1998, has funded a project to pave all unpaved public roads by June 10, 2000. Under this program, approximately 80 miles of unpaved roads will be paved. This project will not include curb and gutter. In addition, the City will pave approximately 3.2 miles of unpaved streets which will include curb and gutter through the Improvement District Program during FY 1998-1999.

As defined in Resolution No. 18949 (Measure 97-DC-4), the City Zoning Ordinance requires that new roads serving multi-family, commercial and industrial development include paving, curbs, gutters and driveways consistent with municipal standards. Paving is required on all new roads serving subdivisions except in areas with very low density and traffic volumes.

In compliance with A.R.S., Title 9, Section 500.04, the City of Phoenix Street Transportation Department will develop and implement plans to stabilize unpaved streets, unpaved alleys, and unpaved arterial shoulders in targeted areas. The plan will address performance goals, criteria for targeting streets, alleys and shoulders, a schedule of implementation, funding options and reporting procedures. The major elements for the first phase of the plan will include:

Paving of approximately 80 miles of unpaved streets in 1998/1999-1999/2000. Curb and gutter will not be included.

Paving of approximately 3.2 miles of unpaved street with curb and gutter through the Improvement District Program (1998-1999).

Construction of 8.95 miles of curb and gutter on arterial streets with unpaved shoulders, through the 5-Year Arterial Street and Storm Drain.

The Street Transportation Department is the responsible City Department. Authority of implementation includes: A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated; A.R.S., Sections 9-500.04 and 49-474.01; City Code Article III, Section 32-41 and 32-49: Road Standards; OR Article II, Section 32-33: Street and Utility Improvements Requirement; City of Phoenix Ordinance No. S-25438: Approving Citywide Paving and Soil Stabilization Projects.

All unpaved City streets are scheduled to be paved during fiscal years 1998-1999 and 1999-2000. The Improvement District paving of unpaved streets is scheduled for fiscal year 1998-1999. These projects include curb and gutter construction. The 1998-1999 curb and gutter projects in the 5-Year Arterial Street and Storm Drain Program are scheduled for fiscal year 1998-1999. Enforcement of the City Code for Road Standards is in progress. The street paving program constitutes the first phase of the plan for paving unpaved roads, shoulders, and alleys in target areas as required in A.R.S. 9-500.04. This phase is scheduled for completion during fiscal year 1999-2000. The final plan and the schedule for additional phases will be defined in the plan and in future City budgets.

$6.0 million has been budgeted for paving all unpaved roads. (City Ordinance S-25438). $3.1 million has been budgeted for 3.2 miles of the Improvement District paving and curb and gutter programs. $20.8 million has been budgeted for this year's curb and gutter projects, on arterial streets in the 5-Year Arterial Street and Storm Drain Program.

1997 ■ Town of Queen Creek indicates that the Town has only two unpaved roads within its town limits. The Town, however, has included in its Fiscal Year 1997-1998 Budget the paving of one of the roads and the chip sealing of the second unpaved road. The Town of Queen Creek's Engineering/Public Works Department would be responsible for implementing the measure. The legal authority empowering this department to implement the measure is contained in A.R.S. Section 9-240, General Powers of Council.

It is expected that this measure will be implemented no later than July 1, 1998. The current budget has been approved and it would involve completing the engineering design, bidding the project and construction. To implement the measure, the current Engineering and Public Works Department staff would be adequate implement the measure. Funding to implement this measure would be budgeted from the Town's General Fund which has already been approved by the Town Council. The enforcement of this measure would be by the Engineering and Public Works Department through the completion of the projects.

1998

Town of Queen Creek, in 1998, indicates that the Town of Queen Creek has already undertaken the task of identifying all public unpaved roads and alleys within its incorporated limits for the MAG 1997 Serious Area Particulate Plan for PM-10. Under Resolution 145-97, the Town committed to pave 1/2 mile and chip seal 1/4 mile of existing roadway. The Town of Queen Creek Engineering and Public Works Department will implement this measure. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council.

It is expected that this measure will be implemented by November 1, 1998. The current budget has been approved and the engineering design is complete. The Town is currently preparing the bid specifications for the project and construction will follow. The current Engineering and Public Works Department staff would be adequate to implement the measure. Funding to implement this measure was include in the Fiscal Year 1998-1999 Budget. The enforcement of this measure would be by the Engineering and Public Works Department through the completion of the identified road projects.

1997 ■

City of Scottsdale, in 1997, indicates that since 1972, Scottsdale City Code, Section 47-24 has required that all streets and alleys be constructed to meet public improvements standards for subdivision streets (Section 47-36; Section 48-137). Street improvement standards typically require asphaltic concrete surfacing, aggregate base, portland cement concrete, and curb and gutter (Section 47-16;, 47-24; & 48-137). Therefore, the City of Scottsdale has proactively avoided creating unpaved roads, shoulders and access points for the past 25 years.

Existing unpaved roads in Scottsdale are systematically paved as development/growth occurs using one of two processes. Developers of master planned communities are required to pave any existing unpaved roads according to these standards. Alternatively, improvement districts are used to improve unpaved existing roads to these standards. Currently, approximately five miles of unpaved existing roads are paved

annually using these mechanisms. As development occurs, this process will continue. The City does not budget for paving these streets.

A pilot program for dustproofing unpaved roads is underway in Scottsdale. The inventory of unpaved roads in Scottsdale changes constantly. Currently, there are approximately 65 miles of unpaved roads in Scottsdale. Recycled Asphalt Pavement (RAP) has been applied to approximately five miles of this inventory as a pilot program. As asphalt becomes available for RAP, Field Services may expand the number of miles that are dustproofing using this product.

Development standards are currently being revised. The City of Scottsdale will consider a requirement in these revised standards that individual lot owner development applicants must dustproof private access roads to the improvements on their property. If this standard is adopted, additional miles of unpaved road could be dustproofed annually.

Authority for implementation includes: Scottsdale City Code 1972; City of Scottsdale Ordinance #2958, October 14, 1996; City of Scottsdale Revised Code, Chapter 47; City of Scottsdale Revised Code, Chapter 48; City of Scottsdale Community Development; and City of Scottsdale Municipal Services. Implementation is in progress. Funding and personnel levels for implementation is allocated within the approved Biennial Budget for FY 1997-1999. City of Scottsdale Community Development Department, Project Review and Municipal Services, Capital Project Management review and approve development; redevelopment and improvement projects to meet applicable City standards. City of Scottsdale Community Development, Inspection Services inspects projects under construction for compliance with City standards.

The City of Scottsdale, in 1997, also indicates that Scottsdale City Ordinance No. 2328, enacted February 4, 1991 authorizes the general manager of the Transportation Department to alter speed limits established by state law on city streets. Maximum speed limits are as established by state law, with a few exceptions. The speed limit on all dedicated alleys in Scottsdale has accordingly been set at 15 mph.

The speed limits are not differentiated between paved and unpaved streets. Signage limiting vehicle speed must be posted on road segments with speed limit exceptions according to state law (A.R.S. 28 Section 703 C). The City of Scottsdale will monitor regional efforts to clarify the benefits of this measure.

Authority for implementation includes: Scottsdale Revised Code, Section 17-1001; City of Scottsdale Transportation Department. Implementation

is in progress. Funding and personnel levels for implementation is allocated within the approved Biennial Budget for FY 1997-1999. City of Scottsdale, Transportation Department establishes speed limits and erects signs; Police Department issues speeding citations.

1998

City of Scottsdale, in 1998, indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, alleys, and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

The Moderate Area Federal Implementation Plan (FIP) for Particulates (PM-10) Pollution requires reducing particulate emissions on roads with more than 250 average daily trips (ADT). Reducing Particulate emission options include paving, gravel, chemical stabilization, or organic stabilization. Those measures are regarded as Reasonably Available Control Measures (RACM).

EPA has indicated that measures for this Serious Area Plan for Particulates (PM-10) will be regarded as Best Available Control Measures (BACM). The City of Scottsdale commitments outlined in this measure are regarded as Best Available Control Measure (BACM) for particulate emissions.

The City of Scottsdale reported an inventory of approximately 65 miles of unpaved roads to EPA in 1996-1997. The City of Scottsdale has recently paved approximately 19 of those miles, and commits to paving additional miles of unpaved roads bring the total to approximately half of the reported 65 miles. The request for budget allocation in the upcoming biennial budget process for this measure will include possible enhancement of the existing program for reducing particulate emissions from alleys, and a proactive citizen communication plan.

The City will prepare and implement a plan to adhere to state law, comply with RACM requirements in the Moderate Area FIP, and satisfy BACM requirements in the Serious Area Particulate Plan. Legal authority for this measures is provided under A.R.S. 9-240, General Powers of Common Council. The City will prepare a plan to reduce particulate emission from public unpaved roads. The City will start to implement this measure on or before January 1, 2000. The City's Transportation Department and Municipal Services Department are responsible for the planning, construction, repair and maintenance of city streets and alleys. These departments are adequately staffed to implement this measure. A

Capital Improvement Program (CIP) will be proposed in the upcoming biennial budget process for the City of Scottsdale. The request for funding to implement this measure will not exceed $2.75 million. The City's Transportation Department General Manager and Municipal Services Department General Manager will ensure that the City implements this measure.

1997 ■ City of Surprise, in 1997, indicates that in Fiscal Year 1996-1997, the City of Surprise chip sealed four miles of unpaved roads. In Fiscal Year 1997-1998, an additional three and one half miles of unpaved roads were chip sealed. This equates to approximately 95 percent of City-owned unpaved roads that have been recently chip sealed. This action by the City meets or exceeds the suggested measures for particulate emission controls suggested by MAG in the letter dated September 9, 1997. No further action is proposed. This measure was implemented by the City of Surprise Pubic Works Department. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. Commitment completed. This measure does not represent an ordinance, regulation or rule requiring enforcement. Enforcement of this measure was provided by the Public Works Director.

1998 City of Surprise, in 1998, reiterates this commitment.

1997 ■ City of Tempe, in 1997, indicates that all public roads in Tempe have been dustproofed in one form or another, with approximately 98 percent of that total number being surfaced with asphalt. Only two miles of road remain that have not been permanently surfaced. There is an ongoing Capital Improvement Program, Improvement District Program, and Scalloped Street Program to permanently surface those few remaining miles of roads as funding is made available or when adjacent property development occurs.

Chapter 30 of the Tempe City Code requires that all new roads serving residential, multi-family, commercial, and industrial development include paving, curb and gutter, and driveways consistent with Tempe Standards.

Regarding vehicle speed limits of 15 miles per hour on unpaved roads, the City will continue to work with ADEQ to consider the impact of this method of dust control on the two miles of remaining unpaved roads within the city limits. These roads exist within residential areas with low average daily travel (ADT).

The Public Works Department is the implementing City Department. The authority for implementation include: A.R.S., Section 9-240: General

Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1998 City of Tempe, in 1998, indicates that all public roads in Tempe have been dustproofed in one form or another, with approximately 98 percent of that total number being surfaced with asphalt. Only two miles of low average daily travel (ADT) roads remain that have not been permanently surfaced. There is an ongoing Capital Improvement Program, Improvement District Program, and Scalloped Street Program to permanently surface those few remaining miles as funding is made available or when adjacent property development occurs.

The City Code requires that all new roads serving residential, multi-family, commercial, and industrial development include paving, curb and gutter, and driveways consistent with Tempe Standards.

Regarding dustproofing existing unpaved public alleys, all public alleys in Tempe have been dustproofed, either through application of an aggregate base course (ABC) or asphalt. These alleys are maintained as required to suppress the generation of dust. The City Code requires that all new alleys serving residential, multi-family, commercial, and industrial development be surfaced with an aggregate base course or asphalt consistent with Tempe Standards.

The Public Works Department is the implementing City Department. The authority for implementation includes the A.R.S., Section 9-240: General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson, in 1997, indicates in Resolution No. 794 that the City will proceed with a good faith effort to implement measures to reduce particulate emissions for unpaved roads. The measure options include: Option 1: Applying dustproofing measures to existing unpaved roads above a specified average daily traffic. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Signage limiting vehicle speed to 15 mph on existing unpaved roads.

1998 City Tolleson, in 1998, indicates that the City commits to paving its half-mile of public unpaved road. All public alleys are currently treated with gravel (ABC). The Tolleson Public Works Department will administer the construction of paved roads. All public unpaved roads will be paved no later than June 10, 2000. The level of personnel necessary will be determined by the contractor hired to execute construction. General fund monies will serve as the primary funding source for this project. The

Safety Services and Public Works Departments will oversee the construction of Tolleson's public paved roads.

1998 ■ Town of Youngtown commits to developing and implementing a plan that requires unpaved roads and alleys to be stabilized to reduce particulate emissions from vehicles traveling over an unpaved surface. Owners/operators of existing public unpaved roads with average daily trip volumes of 250 vehicles or greater within the boundaries of Youngtown will be required to pave, chemically stabilize, or apply gravel to the unpaved road. Requirements for the plan are included in A.R.S. 9-500.04(A)(3), as created by Arizona Senate Bill 1427 (1998). Seven miles of unpaved roads and alleys will be treated by January 1, 2000, continuing as needed, using dustproofing technique of asphalt millings. The plan will be implemented by the Town of Youngtown. Legal authority for this action will be provided under A.R.S. 9-240: General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created by Arizona Senate Bill 1427. Plans to stabilize targeted unpaved roads and alleys need to be developed and implemented beginning January 1, 2000. Owners/operators must have the existing unpaved roads paved, chemically stabilized, or graveled by June 10, 2000. No additional personnel is expected to be required. The Town of Youngtown Building and Safety Department will be responsible for enforcing this measure by denying building permits for noncompliance. The Town of Youngtown Public Works Department will track the progress made with the implementation of this measure.

1999 ■ Maricopa County, revised 1999 commitment, indicates that for dustproofing or paving existing public roads, Maricopa County in the past eight years has paved or stabilized over 390 miles of unpaved roads, an excess of 190 miles over and above the existing commitment. The County will focus on reducing unpaved County roads within the nonattainment area, with a goal of stabilizing at least 20 percent of the unpaved County roads with ADT greater than 150 ADT in the nonattainment area per year. All County unpaved roads within the nonattainment area with ADT greater than 250 will be stabilized by June 10, 2000. All County unpaved roads within the nonattainment area with ADT greater than 150 will be stabilized by June 2004. The County roadway design standard requires that all new subdivision roads and County built roads be paved. A total of 10 miles of unpaved roads will be stabilized under this goal. The County will pave at least 60 miles of existing County "courtesy grade" roads with greater than 150 ADT within the non-attainment area that meet criteria to become public highways by September 2003.

Regarding vehicle speed limits of 15 mph on unpaved roads, the County will evaluate the legal issues associated with establishing speed limits on unpaved roads. Currently, the County has a uniform policy for not posting a speed limit on any unpaved roadway. MCDOT has concluded from past experiences that the constant changing conditions of an unpaved surface, such as: heavy rains/flooded roadway, infrequent maintenance/road grading makes a proper and realistic speed limit posting nearly impossible. This follows the basic practices of the Arizona Department of Transportation, which also will not install speed limit signage for the same reason. The County Attorney has given the opinion that posting of speed limits on dirt roads is unwise and should not be done. This conclusion is further reinforced by the absence of enforcement officers that would be needed to assure compliance with posted speed limits.

The State law sets basic speed limits, and the basic standard of reasonable and prudent speed. With over 2,800 miles of roadway under County jurisdiction, an unreasonable speed limit for dirt roads would be totally unenforceable and would foster disregard for existing speed limits on paved roads. The County will continue to work with the Arizona Department of Environmental Quality to consider the relative impact of speed controls or other measures to reduce unpaved road emissions throughout the nonattainment area as well as in specific areas where particulate levels have been recorded above the NAAQS.

Implementation authority includes: A.R.S. 11-251, General Powers of Board of Supervisors; A.R.S. 28-6705, Maintenance of County Roads (replaces A.R.S. 18-207); A.R.S. 28-6708 Roads and Streets in Unincorporated Towns (replaces A.R.S. 18-209). The program has been in progress for the last ten years. Funding is allocated through the annual budget process. No change in funding is anticipated. However, an additional $7.5 of CMAQ money will be programmed when it becomes available next fiscal year. MCDOT will oversee the implementation of this measure. In addition, A.R.S. 49-406 J. provides an approach for assurances that State and local committed measures will be adequately implemented. MCDOT will submit annual progress reports to the Maricopa County Environmental Services Department as requested.

1999 ■ Maricopa Association of Governments Regional Council approved an amendment to the FY 2000-2004 MAG Transportation Improvement Program on December 8, 1999. This amendment included the following Maricopa County paving dirt road projects: Phases 1 & 2, FY 2001, $1,700,000; Phases 3 & 4, FY 2002, $3,070,000; and Phases 5 & 6, FY 2003, $3,077,500. Collectively, this included approximately $7.85 million for paving projects to reduce fugitive dust from unpaved roads, including

private unpaved roads that are publicly maintained, under the jurisdiction of Maricopa County.

41. Reduce Particulate Emissions from Unpaved Shoulders on Targeted Arterials

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans are required to address performance goals, criteria for targeting the roads, alleys and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

1999 ■ City of Avondale will by September 30, 1999, develop and implement a plan to stabilize unpaved shoulders on targeted arterials. The plan will address performance goals, criteria for targeting the shoulders, and a schedule of implementation, funding options, and reporting requirements. This measure will be implemented by the City of Avondale Public Works Department. Legal authority is provided under A.R.S. 9-240 "General Powers of Common Council", as well as Senate Bill 1427.

The schedule for implementing this measure is as described in the description that the City will develop a plan by September 30, 1999. The plan will address the number of centerline miles the City will treat on an annual basis until all the arterials meet minimal standards. All new roads will be required, through the development process, to provide paving with curb and gutter or to provide a suitable dust suppressant. Funding will be determined through the City's annual budget process. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree has three miles of unpaved roads. The roads are graveled and receive less than an average daily trip volume of 150 vehicles. All road shoulders within the Town of Carefree are paved or graveled. The Town of Carefree Subdivision Ordinance requires new roads and shoulders within the Town of Carefree to be paved with asphalt, concrete, or the equivalent including gravel. The Town Street Department staff will maintain the roads and funds are budgeted in the Street Department maintenance budget. The Town of Carefree will oversee the maintenance of its roads and enforcement of its ordinances.

1998 ■ City of Chandler indicates that the data from the microscale plan demonstrate that agricultural activity is the primary source of PM-10 emissions. However, in an effort to reduce emissions from unpaved shoulders, the City will allow natural vegetation to grow on all unpaved shoulders. The City will also conduct its routine maintenance on these

shoulders by mowing rather than disking and grading unless the City has an approved permit issued by Maricopa County. Curb and gutter will continue to be required as development occurs and streets are upgraded from rural to urban street designs.

The City will also commit to developing and implementing a plan by January 1, 2000 to stabilize any unpaved shoulders on targeted arterials that have not already been addressed. The plans will address performance goals, criteria for targeting the shoulders, a schedule for implementation , funding options and reporting requirements.

City of Chandler, Public Works Department, Streets Division will be responsible for implementation. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council; A.R.S. 9-500.04, Air Quality Control; Definition; Chandler City Code 24A-3, Street Financing Policy; and Chandler City Code 24A-4, Scalloped Street Assessments. Implementation will be ongoing. Funding is allocated through the annual budget process.

1998 ■ Town of Fountain Hills commits to developing and implementing a plan that requires unpaved shoulders of paved roads to be stabilized to reduce particulate emissions from vehicles traveling over such surfaces. Owners/operators of existing public unpaved roads with average daily trip volume of 250 vehicles or greater within the boundaries of Fountain Hills will be required to pave, chemically stabilize, or apply gravel to the unpaved shoulder portion of the road. Requirements for the plan are included in A.R.S. 9-500.04(A)(3) as created by Arizona Senate Bill 1427 (1998).

This measure will be implemented by the Town of Fountain Hills. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. Plans to stabilize targeted unpaved shoulders of arterial paved roads need to be developed and begun to be implemented beginning January 1, 2000. Owners/operators must have the existing unpaved shoulders of arterial paved roads paved, chemically stabilized, or graveled by June 10, 2000. No additional personnel is expected to be required. The Town of Fountain Hills Engineering and Street Maintenance Departments will be responsible for enforcing this measure.

1997 ■ Town of Gilbert, in 1997, indicates that the Town will continue to require developers to install pavement, curb, gutter, sidewalks, and landscaping as development occurs. Further, the Town will continue to evaluate various methods and products available to control dust generation: (1) at access points where unpaved roads meet paved roads: (2) on unpaved shoulders on paved roads: and (3) on unpaved roads and alleys. The

Town will cause to be stabilized with milled asphalt all access points where unpaved roads meet paved roads; unpaved shoulders on paved roads: and unpaved roads and alleys. The Town will require paving of those areas during the land development process.

The Town of Gilbert, Public Works Street Section, will implement the measure on an ongoing basis. The Town will: (1) Continue to identify all areas (shoulders of paved roads) requiring curbing, paving or stabilization, (2) Continue to allow natural vegetation to grow on unpaved shoulders to stabilize the soil. Funding of this measure will come from the Town of Gilbert's Highway User Revenue Fund and be allocated through the annual budget process.

1998 Town of Gilbert, in 1998, indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans must address performance goals, criteria for targeting the shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. Sections 9-500.04 and 49-474.01).

In Resolution No. 1864, dated November 25, 1997, the Town of Gilbert stated its commitment to continue to reduce particulate emissions from unpaved shoulders. The Town also requires developers to install pavement, curbs, gutters, sidewalks, and landscaping when development occurs, per the Town's Land Development Code. In addition, the Town will stabilize all access points where unpaved roads meet paved roads with milled asphalt.

The Town will prepare and implement a plan to adhere to State law. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council. The Town will continue to identify all shoulders of paved roads that require curbing, paving or stabilization. The plan mandated by State legislation will be developed and implemented by January 1, 2000. The Town's Streets Section is responsible for the stabilization of all Town unpaved shoulders on targeted arterials. Funding for this measure will come from the Town's Highway User Revenue Fund and is allocated through the annual budget process. The Town's Public Works Department will ensure that a plan is developed and the stabilization of existing unpaved shoulders is continued.

1997 ■ City of Glendale, in 1997, indicates that currently, the City has two street improvement programs designed to improve sections of existing streets that remain unimproved after substantial urban development has occurred in the area. The City's Scallop Street Improvement Program

and Street Capital Improvement Program are used in cases where sections of streets remain unimproved and safety or congestion concerns arise. Street improvements include the installation of pavement, curbs, gutters, sidewalks and landscaping.

Existing unpaved driveway aprons in the public right-of-way of arterial streets are paved as development occurs to cause streets to be built, widened or improved. The City's current Engineering Guidelines on Design Standards for Infrastructure Construction for Site Development and Infrastructure has a standard for the paving of driveway aprons.

The City currently controls particulate emissions by allowing natural vegetation to grow to stabilize existing unpaved shoulders, where appropriate. The City also paints an edgeline on the outside travel lane of existing arterial streets that do not have curb and gutter.

The City has a general nuisance ordinance (Chapter 25, Nuisances, Section 2) that could be used to control activities on private property that cause dust problems to the prejudice, danger or annoyance of others.

The City's Engineering Department is responsible for the projects constructed within the city, including the establishment of street design and construction standards. The Engineering Department is also responsible for managing the Scallop Street Improvement and Street Capital Improvement Programs. The City's Streets Division is responsible for the repair and maintenance of the City's streets and paved surfaces, including the management of unpaved shoulders. The City's Code Compliance Division is responsible for the enforcement of the City Code. Legal authority for this section is provided under Section 9-240, General Powers of Common Council of the Arizona Revised Statutes.

Formal budget approvals are done annually. The City has budgeted four projects totaling $1.2 million in its Street Capital Improvement Program for FY 1997-1998. The City has also budgeted $150,000 for the Scalloped Street Improvement Program. The City's Code Compliance Division will enforce City Code 25-2 on a complaint basis.

1998

City of Glendale, in 1998, indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads and alleys and stabilize unpaved shoulders on targeted arterial streets beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, alleys, and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

The City will prepare and implement a plan to adhere to State law and the Clean Air Act. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council and the Glendale Charter. The City will prepare a plan to reduce particulate emissions from unpaved shoulders on arterial streets. The City will start to implement this Best Available Control Measure before January 1, 2000. The City's Streets Division is responsible for the repair and maintenance of city streets. The Streets Division is adequately staffed and funded to implement this measure. The City's Deputy City Manager of Public Works will ensure that the City implements this measure.

1998 ■ The City of Goodyear will by April 30, 1999, develop and implement a plan to stabilize unpaved shoulders on targeted arterials. The plan will address performance goals, criteria for targeting the shoulders, and a schedule of implementation, funding options, and reporting requirements. This measure will be implemented by the City of Goodyear Public Works Department. Legal authority is provided under A.R.S. 9-240, General Powers of Common Council, as well as Arizona Senate Bill 1427.

The schedule for implementing this measure is as described in the description that the City will develop a plan by April 30, 1999. The plan will address the number of centerline miles the City will treat on an annual basis until all of the arterials meet minimal standards. All new roads will be required, through the development process, to provide paving with curb and gutter or to provide a suitable dust suppressant. Funding will be determined through the City's annual budget process. City administration will oversee the implementation of this measure.

1997 ■ City of Mesa, in 1997, indicates that it is the City's practice to provide paved shoulders as an arterial street is repaved. Over the last three years, the City has paved 14.7 miles of shoulders in conjunction with overlay projects. It is estimated that there are currently 55 miles of unpaved shoulders remaining in the City of Mesa on arterial and collector streets. As these streets are developed or repaved, the unpaved shoulders will be improved with curb and gutter, paved, or dustproofed. Unpaved shoulders in high traffic areas will be evaluated by City staff for priority dustproofing. The estimated cost to dustproof shoulders with slurry seal or other cost effective dust suppressant materials is approximately $12,000 per mile.

City staff will begin to develop an inventory of unpaved shoulders and access points. The sites will be prioritized based on the dust generating potential. Feasible dust suppressant methods and materials will be evaluated to determine the cost/benefit of the most effective suppressants. Approximately $120,000 for an estimated ten miles of shoulder/access point stabilization will be included in the annual

proposed budget for Council consideration until all high priority unpaved shoulders and access points have been stabilized. Additionally, unpaved alleys will be evaluated for abandonment when possible to eliminate city vehicle traffic and reduce public access. Alleys with high traffic volume will be evaluated as necessary and prioritized for abandonment or dust control.

The City of Mesa's commitment to the installation of curb and gutters is explained above. The City of Mesa Transportation Division is responsible for paving and dustproofing City streets and evaluating effective dust suppressants. The Environmental Programs Division will work with the Transportation Division to develop an inventory and prioritization of unpaved shoulders and access points.

Implementation authority is found in: A.R.S., Section 9-240: General Powers of Councils; Mesa City Charter, Article I - Powers of the City; and Mesa City Code, Section 9-6-4, and Section 9-8-3.

Implementation will be ongoing. Funding is allocated through the annual budget process. Approximately $420,000 will be included in the proposed annual budget for Council consideration until the top priority unpaved roads, shoulders and access points have been stabilized.

1999

City of Mesa, in 1999, indicates that the City submitted detailed Best Available Control Measure commitments for reducing particulate emissions from unpaved shoulders to MAG in December 1998 (97-DC-10). In addition to the measures previously submitted by the City of Mesa, State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads and alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, alleys, and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04).

The City of Mesa Transportation Division is responsible for paving and dust- proofing City streets and evaluating effective dust suppressants. The Environmental Programs Division will work with the Transportation Division to develop an inventory and prioritization of unpaved shoulders and access points.

Implementation authority is found in: A.R.S., Section 9-240: General Powers of Councils; Mesa City Charter, Article I - Powers of the City and Mesa City Code Section 9-6-4 and Section 9-8-3.

Implementation will be ongoing. Funding for personnel and resources is allocated through the annual budget process. As previously committed

in December 1997 under measure 97-DC-8, approximately $120,000 for an estimated ten miles of shoulder/access point stabilization will be included in the annual proposed budget for Council consideration until all high priority unpaved shoulders and access points have been stabilized.

The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1998 ■ Town of Paradise Valley indicates that the Town has no arterial streets with unpaved shoulders, and no streets expected to become arterial streets that have unpaved shoulders. Implementation is complete.

1997 ■ City of Peoria, in 1997, indicates that the City will proceed with a good faith effort to implement all or part of the measure to reduce particulate emissions from unpaved shoulders and unpaved access points on paved roads. The options include: Option 1: Applying dustproofing measures to unpaved shoulders and unpaved access points on existing paved roads. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Installation of curb and gutter on existing paved roads.

1998 City of Peoria, in 1998, indicates that the City will by January 1, 1999, develop and implement a plan to stabilize unpaved shoulders on target arterials which will be implemented on or before January 1, 2000. The plan will address performance goals, criteria for targeting the shoulders, a schedule of implementation, funding options, and reporting requirements. The City has identified 34.8 edge miles of arterials that have unpaved shoulders.

This measure will be implemented by the City of Peoria Public Works Department. Legal authority is provided under A.R.S. 9-240, General Powers of Common Council, as well as Senate Bill 1427. The schedule for implementing this measure is as described in the description that the city will develop a plan by January 1, 1999. The City has 34.8 edge miles of arterials that have unpaved shoulders, or 140 acres. The plan will address the number of centerline miles the city will treat on an annual basis until all of the arterials meet minimal standards. All new arterials (and roads), are required, through the development process, to provide paving with curb and gutter.

The City will perform this activity using its existing maintenance staff with a cost of approximately $12,200 per acre ($1,200,000) for gravel and $40

per regulatory sign which will prohibit parking or other use of the shoulder. The City administration will oversee the implementation of this measure.

1997 ■ City of Phoenix, in 1997, indicates that :

Pavement and other treatment of unpaved shoulders are included as part of the paving projects defined in Measure 97-DC-7b. Treatment of shoulders is also addressed through the curb and gutter program as described in 97-DC-8b. The City will continue to work with Maricopa County and the ADEQ to evaluate the effectiveness and environmental impacts of chemical dust suppressants for stabilizing unpaved shoulders and roads.

The City of Phoenix addresses particulate emissions from access points through ordinances which prohibit parking and driving on unpaved lots:

The Phoenix City Code, Chapter 39, Article II, Section 39-7, was amended in July 1997, to prohibit property owners from allowing vehicles to be parked on unpaved lots or any other surface which is not dust-free as defined in the City Zoning Code. The City Code also includes authority of the Neighborhood Services Department to issue citations to the property owner. (This ordinance is also included in Measure 97-DC-10d).

The Phoenix City Code, Chapter 36, Article XI, Section 36-145, was amended in July 1997, to prohibit vehicle owners from parking on surfaces which are not dust-free as defined in the City Zoning Code. This amendment to the City Code includes the authority for the Police Department to issue citations to the vehicle owner, and to impound vehicles in violation of this Code. (This ordinance is also included in Measure 97-DC-10d).

In July 1997, the City Council approved Resolution #18949 which included measures to address particulate pollution. Measure 97-DC-4 in that Resolution includes the City parking lot standards which require paving for commercial parking lots with three or more spaces and dust-free parking for parking at duplex or single-family homes. This Code helps eliminate access points from unpaved parking lots.

The City installs curb and gutter on arterial streets through the 5-Year Arterial Street and Storm Drain Program. Approximately six miles of curb and gutter are budgeted for Fiscal Year 1997-1998. Additional projects in the 5-Year Plan are subject to the annual budget process. These include only projects to be installed on major streets which currently have no curb and gutter.

The estimated six miles assumes that approximately 85 percent of the following projects currently do not have curb and gutter:

7th Avenue:	Union Hills Drive to Pima
40th Street:	Bell Road to Union Hills Drive
43rd Avenue:	Bell Road to Union Hills Drive
56th Street:	Bell Road to CAP Canal
Bell Road:	Tatum Boulevard to 64th Street

Curb and gutters are also included as part of the pavement projects conducted through Improvement Districts or other paving projects as defined in Measure 97-DC-7a.

As defined in Resolution #18949, Measure 97-DC-4, the City Zoning Ordinance requires that new roads serving multi-family, commercial and industrial development include paving, curbs, and driveways consistent with municipal standards. Paving with curb and gutter is required for streets in new developments.

The implementing City Departments are: City of Phoenix, Street Transportation Department; City of Phoenix, Development Services Department; City of Phoenix, Neighborhood Services Department.

Authority of implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities; Phoenix City Code, Chapter 39, Article 2, Section 39-7: Neighborhood Preservation; Phoenix City Code, Chapter 36, Article XI, Division I, Section 36-145: Vehicles and Traffic.

1997-1998 road paving, shoulders, and curb and gutter projects are scheduled for construction this fiscal year. Enforcement of City Code regarding vehicle use and parking is in progress. Funding is allocated through the annual budget process. The City of Phoenix 5-Year Arterial Street Program: 1997-1998 Fiscal Year. Funding for enforcement of City Code is included as part of the base budget for the departments.

1998

City of Phoenix, in 1998, indicates that the City has funded a project to pave all unpaved public roads by June 10, 2000. Under this program, approximately 80 miles of unpaved roads will be paved. This project will not include curb and gutter. In addition, the City will pave approximately 3.2 miles of unpaved streets which will include curb and gutter through the Improvement District Program during FY 1998-1999.

As defined in Resolution No. 18949 (Measure 97-DC-4), the City Zoning Ordinance requires that new roads serving multi-family, commercial and industrial development include paving, curbs, gutters and driveways

consistent with municipal standards. Paving is required on all new roads serving subdivisions except in areas with very low density and traffic volumes.

In compliance with A.R.S., Title 9, Section 500.04, the City of Phoenix Street Transportation Department will develop and implement plans to stabilize unpaved streets, unpaved alleys, and unpaved arterial shoulders in targeted areas. The plan will address performance goals, criteria for targeting streets, alleys and shoulders, a schedule for implementation, funding options and reporting procedures. The major elements for the first phase of the plan will include:

Paving of approximately 80 miles of unpaved streets in 1998/1999-1999/2000. Curb and gutter will not be included.

Paving of approximately 3.2 miles of unpaved street with curb and gutter through the Improvement District Program (1998-1999).

Construction of 8.95 miles of curb and gutter on arterial streets with unpaved shoulder, through the 5-Year Arterial Street and Storm Drain Program.

The Street Transportation Department is the responsible City Department. Authority for implementation includes: A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated; A.R.S., Section 9-500.04 and 49-474.01; City Code Article III, Section 32-41 and 32-49: Road Standards of Article II, Section 32-33: Street and Utility Improvements Requirement; City of Phoenix Ordinance No. S-25438: Approving Citywide Paving and Soil Stabilization Projects.

All unpaved City streets are scheduled to be paved during Fiscal Years 1998-1999 and 1999-2000. The Improvement District paving of unpaved streets is scheduled for Fiscal Year 1998-1999. These projects include curb and gutter construction. The 1998-1999 curb and gutter projects in the 5-Year Arterial Street and Storm Drain Program are scheduled for Fiscal Year 1998-1999. Enforcement of the City Code for Road Standards is in progress.

The street paving program constitutes the first phase of the plan for paving unpaved roads, shoulders, and alleys in target areas as required in A.R.S. 9-500.04. This phase is scheduled for completion during Fiscal Year 1999-2000. The final plan and the schedule for additional phases will be defined in the plan and in future City budgets.

$6.0 million has been budgeted for paving all unpaved roads. (City Ordinance S-25438). $3.1 million has been budgeted for 3.2 miles of the Improvement District paving and curb and gutter programs. $20.8 million has been budgeted for this year's curb and gutter projects, on arterial streets in the 5-Year Arterial Street and Storm Drain Program.

1998 ■ Town of Queen Creek indicates that the Town currently has a limited number of unpaved shoulders within its corporate limits. The majority of the public rights-of-way within the corporate limits are under the jurisdiction of Maricopa County. The Town would have to work with the Maricopa County Department of Transportation, Public Works, Land and Right-of-Way Division to identify the right-of-way in the Town's jurisdiction.

Town of Queen Creek Engineering and Public Works Department will implement this measure. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council. The schedule for implementing this measure is as follows:

By December 1998	Identify all unpaved shoulders within the Town of Queen Creek's jurisdiction.
By December 1999	Work with Maricopa County Department of Transportation to determine their success with the dust stabilizer study along Rittenhouse Road.
By December 1999	Work with Maricopa County Department of Transportation to determine the feasibility of cooperation if the dust stabilization program is expanded.
By July 1999	Expand the Town's wildflower program to vegetate the targeted unpaved shoulders.

The current Engineering and Public Works Department staff would be adequate to implement the measure. Funding to expand the Town's wildflower program or the entering into an agreement with Maricopa County to apply dust stabilizers would be budgeted from the Town's General Fund. The enforcement of this measure would be by the Engineering and Public Works Department.

1997 ■ City of Scottsdale, in 1997, indicates that since 1972, Scottsdale City Code, Section 47-24 has required that all streets and alleys be constructed to meet public improvements standards for subdivision streets (Section 47-36; Section 48-137). Street improvement standards typically require curb and gutter (Section 47-16; 47-24; and 48-137).

Parking lot standards in Scottsdale were first adopted by Ordinance #455 June 17, 1969. Those standards required paved parking lots only. The original standards were revised by Ordinance #2736 adopted March 7, 1995 and Ordinance #2887 adopted March 19, 1996 providing for an alternative standard of dustproofed parking lot surfacing. Therefore, the City of Scottsdale has proactively avoided creating unpaved shoulders and access points for the past 25-28 years.

Three primary mechanisms are used to pave and/or dustproof unpaved shoulders and access points in Scottsdale. Developers of master planned communities are required to build curb and gutter on any existing unpaved roads according to these standards. Alternatively, improvement districts are used to improve unpaved existing roads to these standards. Any applicant for renovation, expansion or improvement of an existing commercial property must pave or dustproof the parking lot to current standards (Section 47-24). Therefore, existing unpaved access points in Scottsdale have been and will continue to be systematically paved as development/growth occurs. The City does not budget for paving these shoulders and access points to paved roads, instead the above mechanisms are used to pave shoulders and access points as development occurs.

Bike lanes act as paved shoulder surfaces on Pima Road and other City streets. Budget has been approved to add seven more miles of bike lane along Pima Road. Additional miles of bike lanes are budgeted through 1999. The City's Transportation Department General Manager and Municipal Services Department General Manager will ensure that the City implements this measure.

Authority for implementation includes: Scottsdale City Code 1972; City of Scottsdale Ordinance #2958, October 14, 1996; City of Scottsdale Revised Code, Chapter 47; City of Scottsdale Revised Code, Chapter 48; City of Scottsdale Community Development; and City of Scottsdale Municipal Services. Implementation is in progress. Funding and personnel levels for implementation are allocated within the approved Biennial Budget for FY 1997-1999. City of Scottsdale, Community Development, Project Review and Municipal Services, Capital Project Management review and approve project applications. Municipal Services and Field Services apply dustproofing. Inspection Services inspects projects under construction.

1998

City of Scottsdale, in 1998, indicates that State law adopted in the 1998 legislative session requires cities and towns located in the Maricopa County nonattainment area to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans must address performance goals, criteria for targeting the roads, alleys, and shoulders,

a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01).

The Moderate Area Federal Implementation Plan (FIP) for Particulate (PM-10) Pollution requires reducing particulate emissions from unpaved shoulders on arterials. Reducing particulate emission options include paving, gravel, chemical stabilization, or organic stabilization. These measures are regarded as Reasonably Available Control Measures (RACM).

EPA has indicated that measures for this Serious Area Nonattainment Plan for Particulates (PM-10) will be regarded as Best Available Control Measures (BACM). The City of Scottsdale commitments outlined in this measure are regarded as Best Available Control Measure (BACM) for particulate emissions.

The City of Scottsdale commits to reducing particulate pollution from unpaved shoulders on approximately 35 lane miles of arterials. The City will develop criteria for choosing the dust reducing option that best fits each segment of road shoulder, with an emphasis on developing paved bike paths.

The City will work with MAG to prepare and implement a plan to adhere to State law and federal requirements. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council.

The City will prepare a plan to reduce particulate emissions from unpaved shoulders on arterial streets. The City will start to implement this measure on or before January 1, 2000. The City's Transportation Department General Manger and Municipal Services Department General Manager are responsible for planning, repair and maintenance of city streets and bike paths. These departments are adequately staffed to implement this measure. A Capital Improvement Program (CIP) will be proposed in the upcoming biennial budget process for the City of Scottsdale. The request for funding to implement this measure will be approximately $250,000 for Fiscal Years 1999-2001, plus approximately $50,000 in subsequent years for maintenance.

1997 ■ City of Surprise, in 1997, indicates that a previous commitment by the City of Surprise already covers this Measure (97-DC-3. Paving, Vegetating and Chemically Stabilizing Unpaved Access Points Onto Paved Roads, adopted by Resolution No. 97-29 on June 12, 1997).

1998 City of Surprise, in 1998, reiterates this commitment.

1997 ■ City of Tempe, in 1997, indicates that there are approximately two and a half miles of remaining paved public roadway in Tempe that do not have

curb and gutter. Two of those miles will be fully improved within the next six to nine months as part of the Rio Salado Development. The remaining paved roads without curb and gutter will be fully improved as adjacent property develops.

The City will continue to work with Maricopa County and ADEQ to evaluate the effectiveness and environmental impact of chemical dust suppressants for stabilizing those remaining miles of Tempe roads without curb and gutter.

The Public Works Department and the Development Services Department are the implementing City Departments. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1998 City of Tempe, in 1998, indicates that there are approximately two and one half miles of remaining paved public arterial streets in Tempe that do not have curb and gutter. One mile will be fully improved within the next six to nine months as part of the Rio Salado Development. The remaining mile and half of paved roads without curb and gutter will be fully improved as adjacent property develops.

S.B. 1427 requires cities in the Maricopa nonattainment area and implement plans to stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. If the remaining streets sections discussed above are not fully improved by that date, a plan will be implemented to stabilize the shoulders following state requirements.

The Public Works Department and Development Services Department are the implementing City Departments. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson, in 1997, indicates in Resolution No. 794 that the City will proceed with a good faith effort to implement measures to reduce particulate emissions from unpaved shoulders and unpaved access points on paved roads. The measure options include: Option 1: Applying dustproofing measures to unpaved shoulders and access points on existing paved roads. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Installation of curb and gutter on existing paved roads.

1998 City of Tolleson, in 1998, indicates that the City commits to stabilize approximately four miles of unpaved shoulders on 91st and 99th Avenues from I-10 to Buckeye Road using Soil Sement. Soil Sement has been proven to be 28 percent more effective at mitigating fugitive dust than its closest competitor. The City of Tolleson Public Works Department will oversee the application of Soil Sement on unpaved shoulders on public targeted arterials. Targeted arterial shoulders will be treated with Soil Sement no later than June 10, 2000 and retreated on an annual basis thereafter. One to two employees can effectively treat target areas with Soil Sement. General fund monies will cover all expenses for the application and annual treatment of existing public shoulders. The City of Tolleson Public Works Department will oversee the annual treatment of targeted areas after the initial layer of Soil Sement is applied.

1998 ■ Town of Youngtown commits to developing and implementing a plan that requires unpaved shoulders of paved roads to be stabilized to reduce particulate emissions from vehicles traveling over such surfaces. Owners/operators of existing public unpaved roads with average daily trip volumes of 250 vehicles or greater within the boundaries of Youngtown will be required to pave, chemically stabilize, or apply gravel to the unpaved shoulder portion of the road. Requirements for the plan are included in A.R.S. 9-500.04(A)(3) as created by Arizona Senate Bill 1427 (1998).One half mile of existing centerline miles that will be treated by covering with the dustproofing techniques of crushed granite by June 1999.

This measure will be implemented by the Town of Youngtown. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. Plans to stabilize targeted unpaved shoulders of paved roads need to be developed and implemented beginning January 1, 2000. Owners/operators must have the existing unpaved shoulders of paved roads, chemically stabilized, or graveled by June 10, 2000. No additional personnel is expected to be required. The Town of Youngtown Building and Safety Department will be responsible for enforcing this measure by denying building permits for noncompliance. The Town of Youngtown Public Works Department will track the progress made with the implementation of this measure.

1999 ■ Maricopa County, revised 1999 commitment, indicates that the Maricopa County Department of Transportation (MCDOT) has a test program underway that will measure the effectiveness of different dust palliatives on unpaved shoulders. This program treated ten miles of shoulders this year. MCDOT has two capital improvement projects to pave a total of 12 miles of unpaved shoulders to create new bicycle lanes within the next

year. MCDOT will treat an additional 100 miles of shoulders on existing paved arterial and collector roadways with high volume truck traffic by 2003. MCDOT currently requires all new access points to County paved roads be paved to the edge of the right-of-way. MCDOT will pave existing access points when the roadway is reconstructed or widened. MCDOT currently installs curb and gutter when widening the roadway the anticipated ultimate roadway width for all roads classified as urban. Curb and gutter are installed on all road paving projects designed as urban roadways.

Authority for implementation includes: A.R.S. Section 11-252, General Powers of Board of Supervisors; A.R.S., Section 28-6705, Maintenance of County Roads (replaces A.R.S., Section 18-207); A.R.S., Section 28-6708 Roads and Streets in Unincorporated Towns, (replaces A.R.S., Section 18-209). The program has been in progress for the last ten years. Funding is allocated through the annual budget process. No change in funding is anticipated.

42. Low Speed Limit for Unpaved Roads

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which allows local authorities to decrease the speed limit to not less than 15 miles per hour on an unpaved street or road within any district in its jurisdiction if the local authority determines that the limit is necessary to achieve or maintain the National Ambient Air Quality Standards (A.R.S. 28-703).

43. Use of Petroleum Products for Public Road and Street Maintenance

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which allows the use of petroleum based or nonpetroleum based products in the maintenance and repair of unpaved roads, alleys and shoulders identified pursuant to A.R.S. 9-500.04 or 49-474.01. This would apply to cities, towns, and counties (A.R.S. 28-6705).

44. Crack Seal Equipment

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to acquire or utilize vacuum systems or other dust removal technology to reduce the particulates attributable to conventional crack sealing operations as existing equipment is retired beginning January 1, 1999. (A.R.S. 9-500.04 and 49-474.01).

45. Reduce Particulate Emissions from Unpaved Parking Lots

1999 ■ City of Avondale will participate in a regional program to assist in the reduction of particulate pollution. The City intends to notify all owners of

unpaved parking lots that they must pave their parking lot by September 30, 1999. The Maricopa County Rule 310 will be taken into consideration. The rule states that a disturbance and the subsequent dust control plan must be approved by the County. By the end of April 1999, the City will notify all commercial property owners with vacant lots that they have until September 30, 1999 to pave their parking lots. The Community Development and the Code Enforcement Division of the Fire Department will enforce this provision. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree has four unpaved parking lots. The parking lots are all graveled and only one lot exceeds 5,000 square feet. There are no disturbed vacant lots in Carefree. The Town of Carefree Zoning Ordinance requires all new parking lots to be paved with asphalt, concrete, or the equivalent, including gravel. No grading is allowed on vacant lots until a building permit for a structure has been issued. The Town Street Department staff will maintain the roads and funds are budgeted in the Street Department maintenance budget. The Town of Carefree will oversee the maintenance of its parking lots and enforcement of its ordinances.

1998 ■ City of Chandler indicates that all City-owned parking areas are currently dustproofed. The majority of the existing permanent parking lots and vehicle storage lots located at City facilities are paved and the remaining City-owned parking areas have been stabilized with stabilizers and/or gravel.

The City of Chandler has adopted an ordinance which requires all parking areas to have a paved or dustfree surface. This ordinance applies to all parking lots regardless of size. In the past, residents were allowed to continue parking on unimproved surfaces if they proved that they had continuously used the unpaved surface since 1982. This provision will not apply to residential parking areas which are used by 10 or fewer vehicles. The City plans to add two inspectors to the Neighborhood Services Division. These inspectors will be able to assist in increasing the enforcement of the City's ordinances regarding unpaved parking lots.

These commitments do not apply to unpaved parking lots located on an industrial facility, or construction or earth-moving activity on sites that have an approved permit issued by Maricopa County.

City of Chandler, Police Department, Neighborhood Services Division will be responsible for implementation. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council; Chandler City Code Section 1802, General Requirements.

Implementation will be ongoing. Funding is allocated through the annual budget process. Two inspectors were added to the Neighborhood Services Division as part of the 1998-2000 budget.

1998 ■ City of El Mirage has previously paved all existing "high-use" City-owned parking lots. There are no other existing "high-use" unpaved commercial parking lots within the City of El Mirage. In addition, the City's Zoning Ordinance requires that all new parking lots shall be paved with materials suitable to control dust. This measure will continue to be implemented by the City of El Mirage Public Works Department and City Engineer. Ongoing implementation. This measure is enforced by current ordinance. The enforcement function is staffed and administered under the Public Works Department and the City Engineer. The City will not issue a "Certificate of Occupancy" for any new commercial development if the parking lot is not paved.

1998 ■ Town of Fountain Hills indicates that unpaved parking lots and driveways can contribute to increased particulate pollution since the emissions generated by the unpaved surface can become reentrained on adjacent paved roads surfaces. Commitments of the Town of Fountain Hills are as follows:

New Unpaved Parking Areas: The Town of Fountain Hills currently enforces the Town Zoning Ordinance §7.03-A.2 Design and Location of Parking Spaces which specifies the type of surface on which a motor vehicle must be parked. This ordinance states: "...all parking spaces, driveways and access ways shall be surfaced with asphaltic concrete, pavement bricks or cement concrete" (single family driveways with less than five percent slopes may also be surfaced with a stabilized granite) and shall be constructed before the Town will issue an occupancy permit.

Existing Town-Owned Unpaved Parking Areas. The Town of Fountain Hills will pave or stabilize all Town-owned parking lots. All future Town-owned parking areas will be paved or surfaced with compliant material.

Special Event Parking on Unpaved Areas. The Town of Fountain Hills utilizes a private land area (+ 40 acres) as a parking lot for special events during the year. This land is used approximately 10-15 days per calendar year and is therefore exempted from additional measures because vehicles are parked on this land less than 35 days per year.

This measure will be implemented by the Town of Fountain Hills. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils. The Town of Fountain Hills commits to enforcing the current ordinances to assure compliance. No additional personnel is expected to be required. All funding is provided by the private sector

developers to complete their projects in a compliant manner. The Town of Fountain Hills Building Safety, Engineering and Planning and Zoning Departments will be responsible for enforcing this measure through the existing zoning ordinances and Town Codes.

1997 ■ Town of Gilbert, in 1997, indicates that all existing permanent parking lots on Town facilities are already paved or dustproofed. The Town Council will consider adopting an ordinance that will require existing private unpaved parking lots, serving a commercial or industrial activity that has more than five spaces, or with a gross area greater than 2,000 square feet, whichever is less, to be paved or dustproofed. The Town will commit to a schedule that is in accordance with the June 10, 2000 "fully" implemented date. Funding for pavement of private parking lots will be provided by the private sector.

1998 Town of Gilbert, in 1998, indicates that unpaved parking lots were identified by the Environmental Protection Agency (EPA) as a significant source of PM-10 emissions in the Maricopa County nonattainment area. The proposed EPA Moderate Area PM-10 Federal Implementation Plan (FIP) requires that the owner/operator of unpaved parking lots greater than 5,000 square feet pave or stabilize the parking lot.

On February 17, 1998, the Town of Gilbert passed Town Ordinance No. 1091, which requires the owner of unpaved parking lots which contain at least five parking spaces or have a gross area greater than 2,000 square feet to pave or dustproof the lot. The 2,000 square foot standard in the ordinance is more stringent than the EPA's Moderate Area FIP requirement, and is thus considered a Best Available Control Measure (BACM).

This measure will be implemented by the Town's Code Enforcement Department and the Town's Environmental Programs Section. Stabilization standards pertaining to the ordinance will be finalized in October 1998 by the Environmental Programs Section. Legal authority for this action is provided under A.R.S., Section 9-240: General Powers of Common Council. The effective date of this ordinance is March 1, 1999. Existing personnel will be used to implement this measure. Funding for actions related to this measure will be provided in the annual budget process. The Town's Code Enforcement Department is responsible for the enforcement of this measure.

1997 ■ City of Glendale, in 1997, indicates that all existing permanent parking lots and vehicle storage lots located on City facilities are already either paved or dustproofed. The vast majority of the existing parking lots and vehicle storage lots at city facilities are paved.

The City has a general nuisance ordinance (Chapter 25, Nuisances, Section 2) that could be used to control activities on private property that causes dust problems to the prejudice, danger or annoyance of others. The City's Code Compliance Division is responsible for the enforcement of the City Code. Legal authority for this section is provided under Section 9-240, General Powers of Common Council of Arizona Revised Statutes. Funding will be determined through the City's annual budget development process. The City's Code Compliance Division will enforce City Code 25-2 on a complaint basis.

1998 City of Glendale, in 1998, indicates that there are several existing regulations that can be used to mitigate particulate emissions from parking lots. Maricopa County Rule 310 Open Fugitive Dust Sources requires owner/operators of unpaved parking lots greater than 5,000 square feet to pave or stabilize the parking lot.

In order to prevent new permanent unpaved parking lots, the City of Glendale requires new parking spaces and driveway areas serving such parking spaces to be surfaced with concrete, asphalt, or paving blocks (Glendale Zoning Ordinance, Section 7.402(C). The City Ordinance also contains a provision to regulate temporary parking for seasonal sales and special events (Glendale Zoning Ordinance, Section 7.503(A). The City can require measures, e.g., application of gravel on the disturbed surfaces to reduce dust emissions so as not to constitute a health or safety hazard to the public.

The City will keep its residents informed of pertinent City ordinances and appropriate contacts (i.e., phone numbers of City Departments and/or outside agencies) that will be able to resolve dust problems/complaints through citizen newsletters and other appropriate media. The City considers the dust problem as a quality of life issue and intends to adopt a City dust nuisance ordinance.

Maricopa County is responsible for implementing Rule 310 Open Fugitive Dust Sources. The City of Glendale already implements the Zoning Ordinance, Sections 7.402(C) and 7.503(A). Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council and the Glendale Charter. City Council will consider the adoption of a dust nuisance ordinance in the fall/winter of 1998. The City of Glendale's Code Compliance Division is adequately staffed and funded to continue to respond to zoning ordinance issues. The City will consider personnel and funding options as part of its decision regarding the adoption and enforcement of a dust nuisance ordinance. The City's Community Development Group is adequately staffed and funded to regulate the construction of new permanent parking lots and temporary/seasonal parking lots (that are administratively approved

subject to conditions). The City's Marketing/Communications Department is adequately staffed and funded to produce newsletters and other media.

Maricopa County is responsible for enforcing Rule 310. The City of Glendale's Code Compliance Division is responsible for enforcing the City's ordinance. Investigations are generally handled on a complaint basis. The City's Community Development Group is responsible for construction plan review, permitting and final inspections for new permanent parking lots. The Community Development Group is also responsible for reviewing the parking plan for seasonal sales and special events.

1998 ■ City of Goodyear will participate in a regional program to assist in the reduction of particulate pollution. The City intends to notify all owners of unpaved parking lots that they must pave their parking lots by April 1999. The Maricopa County Rule 310 will be taken into consideration. The rule states that a disturbance and the subsequent dust control plan must be approved by the County. This measure will be implemented by the City of Goodyear Community Development Department, Public Works Department, and Code Enforcement Division. By the end of December 1998, the City will notify all commercial property owners with vacant lots that they have until April 1999 to pave their parking lot. Current City staff including the Public Works Department, Community Development, and the Code Enforcement Division will enforce with no additional staff required at this time. City administration will oversee the implementation of this measure.

1997 ■ City of Mesa, in 1997, indicates that with the exception of Falcon Field, all of the designated parking lots owned by the City of Mesa have been paved in the last three years. Paving of approximately 21,500 square yards at Falcon Field including aprons, adjacent parking and an unpaved apron road have been budgeted for Fiscal Year 1997-1998 at an estimated cost of approximately $1,000,000.

City of Mesa Ordinance 3388 (passed August 25, 1997) amended City Code Title 8 Chapter 6 by adding Section 3T which makes it unlawful to park or store any vehicle within the front or side yard of a single residence unless the parking is on an improved, dustproofed parking surface.

The City of Mesa Code Section 11-16-2:(E) 1: requires that parking and loading spaces, maneuvering areas, and driveways must be paved with asphalt, concrete, paving stone, or masonry to a sufficient thickness to withstand repeated vehicular traffic except in Single Residence and Agricultural uses.

The City's Planning and Zoning Division and Building Inspection Divisions are responsible for reviewing and approving new developments within the City to ensure that they comply with City Code requirements. The Code Compliance Division is responsible for responding to complaints and enforcing violations of City Code requirements. The Environmental Programs Division will be taking a proactive approach to working with local residential and commercial facilities to encourage and enforce compliance with dust control requirements.

Implementation authority is found in: A.R.S., Section 9-240: General Powers of Councils; Maricopa County Rule 310: Open Fugitive Dust; Mesa City Charter, Article I - Powers of the City; and Mesa City Code Section 8-6-2T and Section 11-16-2(E)1.

Implementation will be ongoing. Funding is allocated through the annual budget process. Approximately $1,000,000 has been approved for paving at Falcon Field. The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1999

City of Mesa, in 1999, indicates that the City submitted detailed Best Available Control Measure commitments for reducing particulate emissions from unpaved parking lots to MAG in December 1998 (97-DC-9). In addition to the measures previously submitted, the City of Mesa adopted Ordinance No. 3465 amending the City Code by adding Title 8, Chapter 2, Article 1 Particulate Pollution Sources. The ordinance requires, in part, that effective fugitive dust control measures must be implemented on any unpaved parking lot greater than 5,000 square feet.

The Environmental Programs Division will be taking a proactive approach to working with local residential and commercial facilities to encourage and enforce compliance with dust control requirements. Implementation authority is found in A.R.S., Section 9-240: General Powers of Councils; Mesa City Charter, Article I - Powers of the City; and Mesa City Code Section 8-2.

The Particulate Pollution Control Ordinance was adopted by the City Council on May 4, 1998 and became effective June 4, 1998. Implementation will be ongoing. Funding for personnel and resources is allocated through the annual budget process. The Environmental Programs Division has two full time inspectors who are responsible for enforcing the Particulate Pollution Control Ordinance. Additionally, there

is an Environmental Engineer and a Division Director who are authorized to support the particulate pollution program including conducting inspection and initiating enforcement actions.

The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1998 ■ Town of Paradise Valley indicates that an existing ordinance requires that all parking lots, other than for single family homes, be paved unless specifically approved otherwise. An ordinance will be adopted which will require that unpaved parking lots, if any are approved, must be improved and maintained to MAG standards.

The measure will be implemented by the Town of Paradise Valley Community Development Department. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Common Council. The ordinance will be adopted not later than June 10, 2000. The Town of Paradise Valley employs two full time building inspectors. The Town administration will oversee the implementation of this measure. The Town administration will track the progress made with the implementation of this measure.

1997 ■ City of Peoria, in 1997, indicates that the City will proceed with a good faith effort to implement all or part of the measure to reduce particulate emissions from unpaved parking lots. The measure options include: Option 1: Applying dustproofing measures to existing unpaved parking lots. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Applying dustproofing measures to existing commercial and residential unpaved parking lots. Dustproofing measures include paving, stabilizers and application of gravel. Option 3: Requiring paving on existing commercial unpaved parking lots with size or usage exceeding a specified threshold.

1998 City of Peoria, in 1998, indicates that this measure involves the notification of all owners of unpaved parking lots that they must pave their parking lot by April 1999 (this is eight months after September 1998, approximate EPA final rule date). Peoria City Code 17-53, paragraph b, which states that the property owner must do the improvement by March 2000, will be amended to meet the EPA final rule. In addition, the ordinance will be amended to take into consideration Maricopa County Rule 310, which in addition to vegetation, which the city references, talks

about any disturbance and the subsequent dust control plan that must be approved by the County. The City will amend its grading and drainage ordinance to require that the Rule 310 approval must be submitted and incorporated with the city's grading and drainage permit prior to the city issuing its permit. The City has identified 62 lots which will require pavement or dust palliative. The City will also require all driveways including the dirt parking lot to be paved.

This measure will be implemented by the City of Peoria Public Works Department and Neighborhood Code Enforcement Division after amendments to the existing ordinance are passed by its Mayor and Council. By the end of July 1998, the City will notify all commercial property owners with vacant lots that they have until April 1999 to pave their parking lot, per Peoria Code Section 23-76 through 23-80. By November 1998, the City's Section 23-75, paragraph c, will be amended to reflect the April 1999 deadline. Current City staff including the Public Works Department and the Code Enforcement Division will enforce with no additional staff. It is anticipated that 1/2 FTE will be used to accomplish this task. The City administration will oversee the implementation of this measure.

1997 ■ City of Phoenix, in 1997, indicates that the City's program to address unpaved parking lots is included in Measure 97-DC-9b.

As defined in Resolution #18949, Measure 97-DC-4, the City Zoning Ordinance requires paved parking for commercial parking lots with three or more parking spaces, and dust-free parking for single family and duplex residential parking areas. This standard applies to both new development and existing parking lots.

Also, see Measure 97-DC-10d for information on the City's ordinance adopted on July 2, 1997, which prohibits parking on surfaces which are not dust-free.

The City's requirements for commercial parking are included in 97-DC-9b. The City of Phoenix Neighborhood Services Department is the City Department responsible for implementation. Authority for implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities; Phoenix Zoning Ordinance, Chapter 7, Section 702-A.2(e): Dust-Free Parking; Phoenix Zoning Ordinance, Chapter 2: Definitions.

Enforcement of City Code regarding dust-free is implemented on an ongoing basis by the Neighborhood Services Department. Funding is allocated through the annual budget process.

1998 City of Phoenix, in 1998, indicates that the City will pave all unpaved/gravel parking lots, approximately five acres, at City-owned facilities.

City of Phoenix Resolution No. 19006 (Measure 97-DC-9b), requires paving of commercial, industrial, and multi-family parking lots with three or more parking spaces, and gravel or other dust-free parking for single family and duplex homes with three or more spaces. The standard has applied to both new developments and existing parking areas.

The Public Works, Water Services, Parks Recreation and Libraries Departments are responsible for implementing the paving projects at facilities where the unpaved parking lots are located. Authority for implementation includes: A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated; Phoenix Zoning Ordinance, Chapter 7, Section 702.A.2 (e): Dust-Free Parking; Phoenix Zoning Ordinance, Chapter 2: Definitions; City of Phoenix Ordinance No. S-25438: Approving Citywide Paving and Soil Stabilization Projects.

The paving of City-owned parking lots is scheduled for Fiscal Year 1998-1999. City of Phoenix Ordinance No. S-25438 approved $5.8 million for stabilization of both City-owned vacant lots and the paving of City-owned parking lots. Approximately $1.2 million of this budget is anticipated to be used for paving parking lots at City-owned facilities. Neighborhood Services Department enforces the City Zoning Ordnance parking standards.

1998 ■ Town of Queen Creek has already undertaken the task of identifying all unpaved parking lots in its incorporated limits for the MAG 1997 Serious Area Particulate Plan for PM-10. The Town determined that all existing parking lots in the incorporated limits were either paved, had gravel applied to the lot, or an approved use permit with the stipulation that a dust stabilizer was necessary. The current Zoning Ordinance, Article XX Parking and Loading Regulations, requires that all off-street parking areas shall be surfaced with permanent pavement.

The Town of Queen Creek Engineering and Planning Departments will implement this measure. Legal authority for this action is provided under

A.R.S. 9-240, General Powers of Common Council. The Zoning Ordinance is a long-standing document adopted by the Town Council. The current Engineering and Planning Department staff would be adequate to implement the measure. The enforcement of this measure would be by the Engineering and Planning Departments. These departments would enforce the Zoning Ordinance during the zoning application phase.

1997 ■ City of Scottsdale indicates that the parking lot standards were first adopted by Ordinance #455 June 17, 1969. Those standards required paved parking lots only. The original standards were revised by Ordinance #2736 adopted March 7, 1995 and Ordinance #2887 adopted March 19, 1996 providing for an alternative standard of dustproofed parking lot surfacing. Therefore, the City of Scottsdale has proactively avoided creating unpaved parking lots for the past 28 years, and required dustproofing as an alternative for the past two years.

The provisions of Scottsdale City Code, Chapter 46, Article II Parking Lots apply to "All public and private parking lots designed for the parking of six or more motor vehicles..." Any applicant for renovation, expansion or improvement of an existing commercial property must pave or dustproof the parking lot to current standards (Appendix B, Section 9.106 C). Therefore, existing private, unpaved parking lots in Scottsdale have been and will continue to be systematically paved and/or dustproofed as development/ growth and redevelopment occur. The City has budgeted to pave virtually all public, unpaved parking lots in previous years.

Scottsdale City Code, Chapter 46, Article II authorizes the City to "prescribe reasonable regulations to ensure adequate dust control..." of unpaved parking areas. Authority for implementation includes: City of Scottsdale Ordinance #455, June 17, 1969; City of Scottsdale Ordinance #2736, March 7, 1995; City of Scottsdale Ordinance #2887, March 19, 1996; City of Scottsdale Revised Code, Appendix B, Article IX; City of Scottsdale Revised Code, Chapter 46, Article II; City of Scottsdale Community Development; City of Scottsdale Municipal Services. Implementation is in progress. Funding and personnel levels for implementation are allocated within the approved Biennial Budget for FY 1997-1999. City of Scottsdale, Community Development and Municipal Services, Capital Project Management review and approve project applications. Inspection Services inspects projects under construction.

1998 City of Scottsdale, in 1998, indicates that unpaved parking lots can contribute to increased particulate pollution. This measure would reduce particulate emissions from unpaved parking lots by paving, or applying gravel, chemical stabilizers, or organic stabilizers. The Moderate Area

PM-10 Federal Implementation Plan (FIP) unpaved parking lot requirements affect parking lots greater than 5,000 square feet. It exempts unpaved parking lots that are used no more than 35 days per year.

The City of Scottsdale's parking lot paving standard applies to public and private parking lots. The standard is to pave all lots. Parking lots over two acres have the additional option of "dustproof crushed granite or some other suitable material". The City of Scottsdale continues to apply this standard for public parking lots. There are two possible options for private parking lot owners who are required to meet the Moderate Area PM-10 FIP requirements: 1: case-by-case variances that encourage cost effective implementation of the highest dust control efficiency options allowed in the Moderate Area PM-10 FIP may be brought before the Board of Adjustment; and 2: an interim parking lot paving standard could be developed to reduce landscape, curb, open space, buffer, etc. requirements. The City will develop and implement a proactive citizen communication plan designed to assist private parking lot owner/operators.

The City of Scottsdale commitments outlined in this measure are regarded as a Best Available Control Measure (BACM) for particulate emissions. Maricopa County is responsible for implementing Rule 310 Open Fugitive Dust Sources to enforce dust control. The City of Scottsdale has parking lot paving standards. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council. The City is already implementing its ordinance relating to this measure. Other provisions will meet the deadlines outlined in the Moderate Area PM-10 FIP for unpaved parking lots. The City of Scottsdale is adequately staffed and funded to implement the existing parking lot paving standard. The City's existing field inspectors (approximately 41 inspectors from four divisions) will use existing ordinance authority to respond to dust control complaints and issues. The City will track and report on the responses to dust control complaints, dust control issues on construction projects and number of referrals for enforcement activities to Maricopa County under Rule 310. The City commits to take forward in the upcoming Biennial Budget process a funding request of approximately $200,000 over two years. The proposed budget provides for paving public unpaved parking lots, assisting private parking lot owners with information, training City inspection staff on dust control issues, and producing educational materials. The City of Scottsdale enforces parking lot paving standards. Maricopa County is responsible for enforcing dust control issues under Rule 310. The City of Scottsdale responds to nuisance complaints, including dust complaints, under existing ordinance authority. When appropriate, referrals are made to Maricopa County.

1997 ■ City of Surprise, in 1997, indicates that in 1996-1997, the City of Surprise paved all existing "high-use" City-owned parking lots (e.g., Gaines Park, Bicentennial Park, City Hall, Community Services, City Court and Public Works). There are no other existing "high-use" unpaved commercial parking lots within the City of Surprise. In addition, the City's Zoning Ordinance (Section 17.32.080 (B)(12) requires that all new parking lots shall be paved with materials suitable to control dust.

This measure will continue to be implemented by the City of Surprise Community Development and Engineering Departments. Legal authority for this action is provided under Sections 9-240 and 9-276 of the Arizona Revised Statutes. Ongoing implementation. This measure is enforced by current ordinance. The enforcement function is staffed and administered under the Community Development Department, Planning and Zoning Division and the Engineering Department, Civil Inspection Division. The City will not issue a "Certificate of Occupancy" for any new commercial development if the parking lot is not paved.

1998 City of Surprise, in 1998, reiterates this commitment.

1997 ■ City of Tempe, in 1997, indicates that there are no existing unpaved public parking lots in Tempe. Improved lots presently in use will continue to be properly maintained to ensure that dust does not become a problem. The City Zoning Ordinance requires property owners to apply dustproofing to residential and commercial parking lots.

A current effort underway in the Development Services Department to combine the existing Nuisance Ordinance and Neighborhood Enhancement Ordinance to better facilitate proactive enforcement and consistent citation powers will provide additional support in meeting the City's planned PM-10 commitments dealing with dust-causing activities on privately owned vacant lots and/or residential parking situations.

Staff has not identified any nondustproofed commercial parking lots remaining in Tempe.

The Development Services Department and Public Works Department are the implementing City Departments. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1998 City of Tempe, in 1998, reiterates this commitment.

1997 ■ City of Tolleson, in 1997, indicates in Resolution No. 794 that the City will proceed with a good faith effort to implement measures to reduce

particulate emissions from unpaved parking lots. The measure options include: Option 1: Applying dustproofing measures to existing unpaved parking lots. Dustproofing measures include paving, stabilizers and application of gravel. Option 2: Applying dustproofing measures to existing commercial and residential unpaved parking lots. Dustproofing measures include paving, stabilizers and application of gravel. Option 3: Requiring paving on existing commercial unpaved parking lots with size or usage exceeding a specified threshold.

1998 ■ City of Tolleson, in 1998, indicates that Article VII Section B-4 of the City of Tolleson Zoning Code states that, "All required off-street parking spaces shall be paved". Furthermore, Ordinance No. 364, Section 9-5-1 through 9-5-3 prohibits the parking of any vehicle on any lot or area within the City which is not dust-free according to the Tolleson City Code. The proposed EPA Federal Implementation Plan guidelines stated that unpaved parking lots greater than 5,000 square feet must be paved, chemically stabilized, or have gravel applied to mitigate dust. Currently, there are no unpaved parking lots that exceed the 5,000 square foot standard in Tolleson.

The Ordinance already exists under the legal authority granted to the City Council outlined in A.R.S. Section 9-240, General Powers of Councils. Currently two building inspectors, the Deputy Fire Chief, and City Engineer review and approve site plans contingent upon compliance with the Zoning Code article addressing parking lots. No site plan is approved without full compliance of the City of Tolleson Zoning Code, including Article VII which articulates parking lot paving standards. Violation of this code will result in the issuance of a citation by the Safety Service Department. Safety Services Building Inspectors will perform inspections at will to ensure compliance and report any violations, as well as any action taken against violators, to the Zoning Administrator (City Manager).

1998 ■ Town of Youngtown indicates that unpaved parking lots and driveways can contribute to increased particulate pollution since the emissions generated by the unpaved surface can become reentrained on adjacent paved road surfaces. Commitments of the Town of Youngtown are as follows:

New Unpaved Parking Areas: The Town of Youngtown currently enforces Town Ordinance 96-05, "Improved "Surface for Parking", which specifies the type of surface on which a motor vehicle must be parked. The Town of Youngtown commits to amending this ordinance to include a provision that the improved and dust-free parking surface associated with new construction be completed before the Town will issue an occupancy permit.

Existing Unpaved Parking Areas: The Town of Youngtown commits to adopting an ordinance that will require all existing unpaved parking areas greater than 5,000 square feet within the boundaries of Youngtown be dust-free no later than June 10, 2000. Estimated number of seven existing unpaved parking lots will be treated by January 1, 2000 using the dustproofing technique of paving the surfaces.

Special Event Parking on Unpaved Areas: The Town of Youngtown commits to adopting an ordinance requiring owners/operations to make dust-free any lot on which vehicles are parked for purposes of special events prior to, during and subsequent to the special event.

This measure will be implemented by the Town of Youngtown. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils. The Town of Youngtown commits to adopt such new and amended ordinances by September 1998 with implementation scheduled for January 1, 2000. No additional personnel is expected to be required. The Town of Youngtown Building Safety and Police/Code Enforcement Departments will be responsible for enforcing this measure through its existing zoning code. The Town of Youngtown Public Works Department will track the progress made with the implementation of this measure.

1997 ■ Maricopa County, in 1997, indicates that to address existing unpaved parking lots in the unincorporated areas of the County within the PM-10 nonattainment area, the Maricopa County Board of Supervisors is directing the Environmental Services Department to develop an implementation policy with a compliance schedule to proactively apply existing fugitive dust requirements. The program currently operates on a complaint response basis countywide. Maricopa County Air Pollution Control Rule 310 - Open Fugitive Dust Sources, Section 306 (section number may shift in future revision) requires the implementation of control measures for unpaved parking lots larger than 5,000 square feet.

In the unincorporated area of the county, unpaved lots access both paved and unpaved roads. It is impractical to require paving for parking lots which access unpaved roads. In addition, in a high growth area such as Maricopa County, the land on which the parking lot sits may be slated for redevelopment in a relatively short time frame making paving economically infeasible. This contributes to the conclusion that requiring paving as the only control is infeasible due to economic and social considerations.

The Maricopa County Board of Supervisors is authorized by A.R.S., Section 49-479 to adopt rules for air pollution control and by A.R.S.,

Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S., Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S., Section 49-471, the executive head of the department designated under A.R.S., Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S., Section 49-502, 49-511, 49-512 and 49-513. The implementation schedule is:

November-December 1997	Develop implementation policy
January 1998	Workshop draft policy
February 1998	Board consideration of policy
Spring 1998	Sponsor expo on particulate pollution for public outreach
September-November 1998	Conduct survey to identify sites
December 1998	Initiate notification process and establish a compliance schedule

An additional two field FTE and one support FTE will identify affected sites, provide notice, establish a compliance schedule and follow-up milestones. In FY 1998, sponsoring and coordinating expos for public outreach will be funded by approximately $5,000 from funding allocated through the department's annual budget process. Personnel, supplies and outreach for this program are expected to be funded by approximately $100,000 in FY 1999. These requirements will be administered through a field inspection program to identify affected sites and provide notification. The department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filling a class 1 misdemeanor citation.

1998 ■ Arizona Department of Transportation indicates that unpaved parking lots and driveways can contribute to increased particulate pollution similar to unpaved roadways. Unpaved parking areas also contribute to the particulate pollution problem, since the emissions generated by the unpaved surface can become reentrained on adjacent paved road surfaces. In addition, wind erosion of silt from unpaved parking adds to the total fugitive dust emissions in an area.

There is a new proposed federal requirement which pertains to this measure. The proposed Federal Implementation Plan (FIP), which

becomes final in July 1998, requires any owners/operators of unpaved parking lots greater than 5,000 square feet to pave, chemically stabilize or apply gravel to the lot within eight months of the rule's effective date. For unpaved parking lots that are used no more that 35 days per year, owners/operators may choose to apply chemical stabilizers within 20 days prior to any day in which over 100 vehicles enter the lot. Since this is a Moderate Area FIP, EPA considers this to be a Reasonably Available Control Measure.

This measure would be implemented by the Arizona Department of Transportation (ADOT). Legal authority for this action would be A.R.S. 49-406 and A.R.S. 28-332 Department Jurisdiction.

A review of the ADOT construction offices and maintenance shops located throughout the nonattainment area has shown that the parking lots at these locations have either been paved, stabilized, or graveled. A review of the ADOT Motor Vehicle Division's Driver's License and Registration Stations has shown that these parking lots are also paved. The Motor Vehicle Commercial Driver's License Station testing area had previously been stabilized, but may need to be redone. This includes a parking lot for motorcycles and commercial vehicles that is across from the station and is unpaved. This particular area was to be addressed as part of two other measures that were identified as part of the Governor's Air Quality Strategies Task Force, i.e., addressing hot-spot areas including 27th Avenue and I-10. Following the implementation of the FIP, continuing on-site inspections will be made at each site to determine which ADOT sites may need any further attention as far as stabilization or additional gravel.

There is currently some language in the National Pollution Discharge Elimination System that relates to the contractor's vehicle wash-down areas and is included as part of the contract. Stabilization of parking lots or staging areas for the contractor's office or construction areas would have to be addressed through the development and approval of new contract language for future projects in the nonattainment area.

For those ADOT office parking lots that are currently stabilized or graveled and not paved, there are available cost-effective materials that meet EPA requirements, that can be used by the agency for any future re-stabilization requirements. ADOT, through the Transportation Planning Group Senior Transportation/Air Quality Planner, will conduct further on-site inspections and complete a report on those sites that may need additional stabilization or gravel. A feasibility study addressing additional contract language for contractor requirements for reducing PM-10 emissions will be completed and reported on following the implementation of the FIP.

46. Reduce Particulate Emissions from Vacant Disturbed Lots

1999 ■ City of Avondale will participate in a regional program led by the Maricopa Association of Governments to foster interagency cooperation to reduce particulate pollution. The City currently does not have an ordinance in place concerning dust control. The City has estimated 500 acres of private, vacant lots. Acreage that has been recorded consists of custom lots and undeveloped subdivisions within the City's jurisdiction. Much of the acreage is presently in its natural state of Sonoran Desert.

By September 30, 1999, letters will be written to property owners of vacant lots that are being used by vehicular traffic for parking, weed abatement or other access. The City will continue to work with Maricopa County to support the Rule 310 Program. The Community Development and the Fire Department Code Enforcement Division will implement this provision. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree has four unpaved parking lots. The parking lots are all graveled and only one lot exceeds 5,000 square feet. There are no disturbed vacant lots in Carefree. The Town of Carefree Zoning Ordinance requires all new parking lots to be paved with asphalt, concrete, or the equivalent, including gravel. No grading is allowed on vacant lots until a building permit for a structure has been issued. The Town Street Department staff will maintain the roads and funds are budgeted in the Street Department maintenance budget. The Town of Carefree will oversee the maintenance of its parking lots and enforcement of its ordinances.

1998 ■ City of Chandler commits to adopt an ordinance that will require owners/operators of vacant lots of 5,000 square feet or greater that have been disturbed by motor vehicles to do one of the following:

- Erect signs, fencing, shrubs, trees or other barriers to prevent motor vehicle trespass or parking; or
- Apply surface gravel or chemical/organic stabilizers to all disturbed surface areas.

The City will also adopt an ordinance that will require owners/operators of vacant lots that remain undeveloped for more than fifteen calendar days and where more than 0.50 acres of the surface of the lot has been disturbed to do one of the following:

- Establish ground cover, apply a dust suppressant, restore to a natural state; or
- Apply gravel to the disturbed area.

The City will modify its ordinance on weed abatement to require the following for vacant lots where the weed abatement disturbs more than 0.50 acres or greater:

- Application of a dust suppressant immediately prior to or during weed abatement;
- Prevention or elimination of material track-out onto paved surfaces and assess points adjoining paved surfaces; and
- Application of a dust suppressant or gravel or the use of compaction or an alternative control measure immediately following weed abatement.

These ordinances will be effective no later than May 1, 1999.

The City plans to add two inspectors to the Neighborhood Services Division. These inspectors will be able to assist in increasing the enforcement of the City's ordinances regarding vacant lots.

These commitments do not apply to vacant lots located on an industrial facility, or construction or earth-moving activity on sites that have an approved permit issued by Maricopa County.

City of Chandler, Police Department, Neighborhood Services Division; Fire Department, Fire Prevention Division will be responsible for implementation. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council and Chandler City Code Sections 10-6(d), Premises; 10-10(f), Creating, Causing or Maintaining a Nuisance; and 10-7 Vacant Land. Implementation will be ongoing. Funding is allocated through the annual budget process.

1998 ■ City of El Mirage indicates that the City of El Mirage Municipal Code, Chapter 13, Vehicles and Traffic, will be amended by the City Council to include the following language:

Property owners shall be required to install and/or place signs, fencing, shrubs, trees, barriers, surface gravel, or chemical/organic stabilizer within eight months of the effective date of the Federal Implementation Plan (FIP) or sixty calendar days, whichever is later, following the initial determination of disturbances of substantial vehicle traffic across or on lots and that traffic causes airborne dust. This requirement applies to vacant lots greater than 5,000 square feet in size.

This measure will be implemented by the City of El Mirage Engineer and/or Public Works Department. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. The control measures must be implemented within eight months following the effective date of the FIP or within sixty calendar days following the disturbance, whichever is later. No additional personnel is expected to be required.

For weed abatement on vacant lots, the City of El Mirage indicates that the City of El Mirage Municipal Code, Chapter 10, Health and Sanitation, Section 10-4-10 Weed Abatement will be added by the City Council to include the following language:

The property owner must apply dust suppressant(s) immediately prior to or during weed abatement and prevent or eliminate material track-out onto paved surfaces and access points adjoining paved surfaces and apply dust suppressant(s), gravel compaction or alternative control measures immediately following weed abatement. This measure will be required within eight months of the effective date of the FIP. This requirement applies to vacant lots with disturbed surfaces of 0.50 acres or greater.

This weed abatement measure will be implemented by the City of El Mirage Public Works Department, Street Division. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils. The control measures must be implemented within eight months following the effective date of the FIP. The measure will be enforced by ordinance. The enforcement function will be staffed and administered under the Public Works Department, Code Enforcement Officer and/or the City Engineer.

For further weed abatement on vacant lots, the City of El Mirage Municipal Code, Chapter 10, Health and Sanitation, Section 10-1-1 (Definitions) will be amended by the City Council to include the following:

"Vegetation Maintenance" means any abatement of plant growth whether living or dead, including but not limited to grass and weeds, on non-agricultural property, shall be mowed rather than disked or plowed.

This measure will be implemented by the City of El Mirage Public Works Department, Street Division. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. This measure will be enforced by ordinance. The enforcement function will be staffed and administered under the Public Works Department, Code Enforcement Officer and/or the City Engineer.

1998 ■ Town of Fountain Hills indicates that the Town has adopted Town Code, Chapter 12-2 - Traffic Control and §12-2-11 Operation of Vehicles on Vacant Lots which prohibits vehicular use on or across any portion of a vacant lot (of any size) other than as an established dustproof driveway, except during activities authorized by the Town. The Town of Fountain Hills has approximately 1,900 + acres of currently underdeveloped but developable platted lots. These lots are located in pristine native desert environments and Town ordinances and code prohibit any land disturbance without a development permit.

The Town will approve an ordinance that will require:

- Scraping the ground for weed abatement will require a dust control plan.
- Disturbed surfaces on new platted vacant lots must be treated within eight months after the disturbance. Treating can be by establishing ground cover vegetation, applying a dust suppressant, restoring to a natural state, or applying gravel.
- Motor vehicle surfaces on new platted vacant lots shall be restricted to non-use or treated within two months after the disturbance. Restricting use shall include placing signs, fencing, shrubs, trees, barriers, surface gravel, or chemical/organic stabilizer.

The following exemptions/unregulated areas will apply to these requirements:

- Vacant lot disturbed surfaces that are less than 0.50 acres.
- Vacant lots which are occupied, used or developed that are not inactive for a period of more than 15 days.
- Vacant lots with motor vehicle disturbances that are 5,000 square feet or less.
- Weed abatement operations that maintain weed stubble three or more inches above the soil surface for the purpose of controlling a potential fire hazard or otherwise unhealthy condition.
- Weed abatement operations that are permitted by Maricopa County.

This measure will be implemented by the Town of Fountain Hills. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. The control measure has been adopted and currently is enforceable. No additional personnel is expected to be required. There is no additional funding required at this time. The Town of Fountain Hills Marshal's Department will be responsible for enforcing this measure by enforcing the ordinance and Town Code for noncompliance.

1997 ■ Town of Gilbert, in 1997, indicates that the Town has an ordinance that prohibits the operation of a vehicle on or across any portion of an existing vacant lot other than by the owner of the property, unless written permission is obtained from the owner. The Town will consider adopting an ordinance to further prohibit the operation of vehicles on vacant lots other than by the owner of the property if the lot is not dustproofed.

The Town will continue to work cooperatively with Maricopa County and other municipalities on regional solutions to increase the effectiveness of County Rule 310: Open Fugitive Dust Sources, including the control of fugitive dust from vacant lands. The Gilbert Town Council adopted Resolution 1788 on April 15, 1997, stating the Town's intent to work cooperatively with Maricopa County to control fugitive dust pollution. The implementing Town Department is Environmental Compliance, Code Enforcement. Authority for implementation is A.R.S. Section 9-240: General Powers of Councils and Gilbert Town Code. Ongoing implementation. Code Enforcement responds to calls that they receive from residents. They write citations where applicable. Personnel and/or funding is allocated through the annual budget process.

For weed abatement on vacant disturbed lots, the Town of Gilbert, in 1997, indicates that the Town supports the County's proposed clarification of a provision in Rule 310: Open Fugitive Dust Sources which will require a County permit prior to blading for weed control in existing vacant land. The Town will work cooperatively with Maricopa County to help ensure that dust emissions from the blading of vacant lots for weed control are under control. Gilbert will report cases to the County where it witnesses excessive dust being generated from weeding abatement. The Town will also inform/educate the public through various media that blading may require a County permit. The Town will commit to a schedule that is in accordance with the June 10, 2000 "fully" implemented date. Code Enforcement will be the implementing Department. Personnel and/or funding will be allocated through the annual budget process.

1998 Town of Gilbert, in 1998, indicates that disturbed vacant lots were identified by the Environmental Protection Agency (EPA) as a significant source of PM-10 emissions in the Maricopa County nonattainment area. The proposed EPA Moderate Area PM-10 Federal Implementation Plan (FIP) requires the stabilization of all disturbed vacant lots larger than one-tenth of an acre.

On February 17, 1998, the Town of Gilbert adopted Town Ordinance No. 1090, which amended Section 62-5 of the Town's Municipal Code to prohibit the operation of any motor vehicle on or across the property of

another if that property is not paved or dustproofed in accordance with the standards adopted by the Department of Public Works. The Town Ordinance is more stringent than the EPA's Moderate Area FIP requirement, and is thus considered a Best Available Control Measure (BACM).

This measure will be implemented by the Town's Code Enforcement Department and the Town's Environmental Programs Section. Stabilization standards pertaining to the ordinance will be finalized in October 1998 by the Environmental Programs Section. Legal authority for this action is provided under A.R.S., Section 9-240: General Powers of Common Council. The effective date of this ordinance is March 1, 1999. Existing personnel will be used to implement this measure. Funding for actions related to this measure will be provided in the annual budget process. The Town's Code Enforcement Department is responsible for the enforcement of this measure.

1997 ■ City of Glendale, in 1997, indicates that the City has an ordinance provision that prohibits the operation of a vehicle on or across any portion of an existing vacant lot other than by the owner of the property, unless the lot is dustfree. The City also has a general nuisance ordinance (Chapter 25, Nuisances, Section 2) that could be used to control activities on private property that cause dust problems to the prejudice, danger or annoyance of others.

The City will continue to work cooperatively with Maricopa County and other municipalities on regional solutions to increase the effectiveness of County Rule 310: Open Fugitive Dust Sources, including the control of fugitive dust from vacant lands. On March 25, 1997, the Glendale City Council adopted Resolution 3109 New Series stating the City's intent to work cooperatively with Maricopa County to control the generation of fugitive dust pollution.

The City's Code Compliance Division is responsible for the enforcement of the City Code. The City's Environmental Resources Division is responsible for working with Maricopa County and other municipalities on regional solutions to control particulate matter emissions. Legal authority for this section is provide under Section 9-240, General Powers of Common Council of the Arizona Revised Statutes. Funding will be determined through the City's annual budget development process. The City's ordinance is enforced through the City's Code Compliance Division.

For weed abatement on vacant disturbed lots, the City of Glendale, in 1997, indicates that the City supports the County's proposed clarification of a provision in Rule 310: Open Fugitive Dust Sources which will require

a County permit prior to blading for weed control on existing vacant land. The City will work cooperatively with Maricopa County to help ensure that dust emissions from the blading of vacant lots for weed control are under control. Glendale will report cases to the County where it witnesses excessive dust being generated from blading for weed abatement. The City will also inform/educate the public through various media that blading for weed control may require a County permit.

The City's Marketing Department is responsible for preparing and distributing citizen newsletters. The City's Code Compliance Division will assist the County in informing the public that blading for weed control may require a County permit. Legal authority for this section is provided under Section 9-240, General Powers of Common Council of the Arizona Revised Statutes. Funding will be determined through the City's annual budget development process.

1998 City of Glendale, in 1998, indicates that there are several existing regulations that can be used to mitigate particulate emissions from vacant disturbed lots. Maricopa County's Rule 310: Open Fugitive Dust Sources, Section 305 states that no person shall cause, suffer, or allow a vacant parcel, or an urban or suburban open area to be driven over or used by motor vehicles without first implementing reasonably available control measures to effectively prevent or minimize fugitive dust. In addition, Rule 310, Section 309 states that no person shall cause or allow any urban or suburban open area or vacant parcel to remain unoccupied, unused, vacant or undeveloped for more than 15 days without first implementing reasonably available control measures to effectively prevent or minimize fugitive dust.

The City has an ordinance (Chapter 24, Section 173) that prohibits the operation of a vehicle on or across any portion of an existing vacant lot other than by the owner of the property, unless the lot is dustfree. The City will keep its residents informed of pertinent City ordinances and appropriate contacts (i.e., phone numbers of City Departments and/or outside agencies) that will be able to resolve dust problems/complaints through citizen newsletters and other appropriate media. The City considers the dust problem as a quality of life issue and intends to adopt a City dust nuisance ordinance.

Maricopa County is responsible for implementing Rule 310 Open Fugitive Dust Sources. The City of Glendale's Code Compliance Division is responsible for implementing the City Codes relating to this measure. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council and the Glendale Charter. City Council will consider the adoption of a dust nuisance ordinance in the fall/winter of 1998. The City will consider personnel and funding options

as part of its decision regarding the adoption and enforcement of a dust nuisance ordinance. The City's Marketing/Communications Department is adequately staffed and funded to produce newsletters and other media. Maricopa County is responsible for enforcing Rule 310. The City of Glendale's Code Compliance Division will enforce the City's motor vehicle use on vacant property ordinance, on a complaint basis.

1998 ■ City of Goodyear will participate in a regional program led by the Maricopa Association of Governments to foster interagency cooperation to reduce particulate pollution. The City currently does not have an ordinance in place concerning dust control. However, Resolution No. 97-594 was adopted by the City Council supporting the Maricopa County Rule 310 Program. The City has estimated 320 acres of private, vacant lots. Acreage that has been recorded consists of custom lots and undeveloped subdivisions within the City's jurisdiction. Much of the acreage is presently in its natural state of Sonoran Desert.

This measure will be implemented by the City of Goodyear Community Development Department, the City's Code Enforcement Division, and Public Works Department. By December 1998, letters will be written to all property owners of vacant lots that are being used by vehicular traffic for parking or other access. The City will continue to work with Maricopa County to support the Rule 310 Program. City of Goodyear currently is enforcing Rule 310 with current staff. Future positions may be required. City administration will oversee the implementation of this measure.

1997 ■ City of Mesa, in 1997, indicates that the City of Mesa Code Section 8-6-3(B) prohibits the deposition of materials on or in anything other that a building or structure, a screened area or within a trash receptacle. Section 8-6-3(J) prohibits the displaying of any vehicle or boat for sale on vacant or undeveloped and unsurfaced property and makes it illegal for a property owner to allow such displays on vacant, undeveloped or unsurfaced property. Section 8-6-3(L) makes it unlawful to park, and for any owner or occupant of land to allow or permit any person to park, a commercial vehicle on any undeveloped and unsurfaced private property.

Maricopa County Rule 310: Open Fugitive Dust, Section 306 prohibits motor and/or off-road vehicles from being driven over vacant parcels of land that have not been effectively treated to prevent or minimize fugitive dust emissions. Section 310 requires that vacant parcels must have effective dust control measures implemented within 15 days of the parcel becoming vacant. The City Code and County Rule 310 requirements make it illegal to drive a vehicle on vacant property and to dump on vacant property which would require driving across some portion of the property.

Maricopa County Rule 310: Open Fugitive Dust, Section 309 requires dustproofing disturbed surface areas. Section 310 requires that effective dust control measures must be implemented on any vacant parcel within 15 days (of it becoming unoccupied, unused, vacant or undeveloped) and that permanent dust control measures must be implemented to achieve final stabilization within eight months.

Mesa City Code Section 11-15 regulates landscaping on all but single family residential and agricultural buildings, The purpose of the landscaping requirements includes control of dust and specifies appropriate vegetative, organic and inorganic ground cover. The County Rule 310 provisions of Section 309 and 310 include vegetative cover as appropriate dust control methods.

The City's Planning and Zoning Division and Building Inspection Divisions are responsible for reviewing and approving new developments within the City to ensure they comply with City Code requirements. The Code Compliance Division is responsible for responding to complaints and enforcing violations of City Code requirements. The Environmental Programs Division will be taking a proactive approach to working with local residential and commercial facilities to encourage and enforce compliance with dust control requirements.

Implementation authority is found in: A.R.S., Section 9-240: General Powers of Councils; Maricopa County Rule 310: Open Fugitive Dust; Mesa City Charter, Article I- Powers of the City; and Mesa City Code, Section 9-6-4, Section 9-8-3, Section 8-6-3, and Section 11-15.

Implementation will be ongoing. Funding is allocated through the annual budget process. The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

For weed abatement on vacant distributed lots, the City of Mesa, in 1997, indicates that Maricopa County Rule 310: Open Fugitive Dust, Section 316 requires that anyone blading, disking, or plowing under to remove vegetation from an area that exceeds 0.1 acre must obtain an earth moving permit and implement effective dust control procedures. The City Code Compliance Division currently sends out letters requiring abatement of vegetation to property owners that have overgrown or dead vegetation that presents either a fire hazard or a nuisance. The City will modify the standard notification letter to encourage mowing and/or fire breaks in lieu

of disking or plowing. Mowing or other stabilization will be used when possible for weed control for activities by or for the City on City property.

The City will work with other local governments and the County to develop informational materials to inform property owners of the need to control dust on vacant lots. The material will discourage property owners from using disking or blading as a measure to control weeds and encourage landscaping or other stabilization techniques. Examples of the types of information methods include: articles in city newsletters, articles in the employee newsletter, notices in utility bills, and information included in citations sent for weed control.

The Code Compliance Division is responsible for responding to complaints and enforcing violations of City Code requirements and sending out notification letters for vegetation abatement. The Environmental Programs Division will be taking a proactive approach to working with local residential and commercial facilities to encourage and enforce compliance with dust control requirements.

Implementation authority is found in: A.R.S.,Section 9-240: General Powers of Councils; Maricopa County Rule 310: Open Fugitive Dust; Mesa City Charter, Article I - Powers of the City; and Mesa City Code, Section 8-6-3 (nuisance abatement).

Implementation will be ongoing. Funding is allocated through the annual budget process. The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1999 City of Mesa, in 1999, indicates that detailed Best Available Control Measure commitments for reducing particulate emissions from vacant disturbed lots were submitted to MAG in December 1998 (97-DC-10). In addition to the measures previously submitted, the City of Mesa adopted Ordinance No. 3465 amending the City Code by adding Title 8, Chapter 2, Article 1 Particulate Pollution Sources (Particulate Pollution Control Ordinance). The ordinance includes Sections 8-2-4 (D) and (F) which require effective dust control and stabilization of vacant disturbed lots. Property owners of disturbed vacant lots that are identified as generating fugitive dust will be notified of the City Code requirements by the Environmental Programs Division. Identification of high priority vacant lots will be based on proactive inspections and response to complaints.

The Environmental Programs Division will be taking a proactive approach to working with local residential and commercial facilities to encourage and enforce compliance with dust control requirements for disturbed vacant lots. Implementation authority is found in: A.R.S.,Section 9-240: General Powers of Councils; Mesa City Charter, Article I - Powers of the City ; and Mesa City Code Section 8-2.

The Particulate Pollution Control Ordinance was adopted by the City Council on May 4, 1998 and became effective June 4, 1998. Implementation will be ongoing. Funding for personnel and resources is allocated through the annual budget process. The Environmental Programs Division has two full time inspectors who are responsible for enforcing the Particulate Pollution Control Ordinance. Additionally there is an Environmental Engineer and a Division Director who are authorized to support the particulate pollution program including conducting inspections and initiating enforcement actions.

The Mesa City Code provides enforcement authority for violation of City Code requirements. Inspectors from the Environmental Programs Division will be conducting inspections throughout the City to strengthen dust control practices and procedures. An important component of this program will be public education on dust control methods and the health hazards associated with particulate pollution.

1998 ■ Town of Paradise Valley indicates that there is an existing grading and dust control ordinance which prohibits any land disturbance of any size on a vacant lot. The ordinance also requires a dust control plan if the lot is disturbed and then left vacant for more than 15 days, and further requires that any parking area be dustproofed. An additional ordinance would be adopted which would require the owner of a vacant lot that is disturbed by vehicle use to control access or dustproof the lot per MAG standards.

This measure will be implemented by the Town of Paradise Valley Community Development Department. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council. The new ordinance will be adopted no later than June 10, 2000. There are two building inspectors and one zoning inspector who enforce this regulation, together with administrative, clerical, and legal support. The Town administration will oversee the implementation of this measure.

1997 ■ City of Peoria, in 1997, indicates that the City will proceed with a good faith effort to implement all or part of the measure to reduce particulate emissions for vacant disturbed lots. The options include: Option 1: Requiring property owners to install signs and barriers where there is

evidence of vehicle trespassing on existing vacant lots. Option 2: Applying dustproofing measures after incidence of disturbance on existing vacant lots. Dustproofing measures include application of gravel and barriers (in combination), stabilizers, and application of gravel (alone). Option 3: Establishing groundcover vegetation on existing vacant lots which is the purposeful selection of plants to control dust. Option 4: Restricting vehicle owners from parking on all existing unpaved surfaces.

For weed abatement on vacant disturbed lots, the City of Peoria, in 1997, indicates that the City will proceed to implement all or part of the measure to reduce particulate emissions on vacant disturbed lots through weed abatement methods. The options include: Option 1: Requiring mowing for weed abatement on all existing lots. Option 2: Requiring mowing for weed abatement on existing lots that can be mowed and requiring fire breaks and boundaries on existing vacant disturbed areas that cannot be mowed.

1998

City of Peoria, in 1998, indicates that the Peoria Code Section 17-53, paragraph b, specifies the owner or person in control must at all times maintain the premises free of weeds, if one acre or less or if greater that one acre they must construct fire breaks to protect the adjacent property. The ordinance must be amended to reflect disturbance and the subsequent requirement of the approved Maricopa County permit.

The City's ordinance, in addition, will amend its grading and drainage ordinance to reflect the requirement of receiving the Maricopa County permit and incorporate it into the City's grading and drainage plan for enforcement. Peoria Code Section 17-53, paragraph c, also refers to the owner of vacant lots that are being used by vehicular traffic as a roadway or bypass to eliminate the vehicular access. The City has identified 17 commercial lots plus large tracts of desert that will be targeted for access and dust control. Other lots (.1 acre or more) will be identified and targeted for access and dust control, per Maricopa County Rule 310.

This measure will be implemented by the City of Peoria Public Works Department, Building Safety, and the Neighborhood Code Enforcement Division. By August 1998, letters will be written to all property owners of vacant disturbed lots that are being used by vehicular traffic for parking or other access. The City's ordinance will be amended to reflect the April 1999 date. By January 1, 1999, the City's grading and drainage ordinance will be amended to reflect the requirement to include Maricopa County Rule 310 permit as a prerequisite and as part of the City's grading and drainage permit. The City of Peoria will fund this project with existing staff. It is estimated that one FTE will be used to accomplish this task;

an additional position may be necessary. The City administration will oversee the implementation of this measure.

1997 ■ City of Phoenix, in 1997, indicates that the City's program to address dust generated from vehicles on vacant lots is included in Measure 97-DC-10d.

Maricopa County Rule 310 requires property owners to apply permanent dustproofing measures after earthmoving activities on vacant lots. The City will continue to work cooperatively with Maricopa County to promote compliance with this rule.

Additional programs to address dust generated from disturbed vacant lots are included in Measure 97-DC-10d.

Maricopa County Rule 310 requires property owners to apply permanent dustproofing measures after earthmoving activities on vacant lots. Dustproofing can include vegetation. As noted in Measure 97-DC-10b, the City will continue to work cooperatively with Maricopa County to promote compliance with this rule.

The City is working with the Arizona Department of Transportation to help identify excess properties along freeways and to expedite their sale. This has helped eliminate vacant parcels and promotes development and landscaping.

The City's 1988 Freeway Mitigation Bonds support projects to reduce the impact of freeways on neighborhoods and adjacent properties. The primary purpose of the project is to address noise and neighborhood stabilization. A portion of the bond fund is used to enhance landscaping, recreational trails, and other projects which can reduce particulates. In 1997-1998, freeway landscaping upgrades beyond the ADOT standard on the Outer Loop ($300,000) and Squaw Peak: Phase II ($412,000) are planned. In 1997-1998 the Black Canyon/Maricopa Freeway Mitigation Plan is being developed to address freeway impacts on property within 1/4 mile of the freeway. It is anticipated that several hundred thousand dollars will be allocated in the 1998-1999 Capital Improvement Program (CIP) budget to upgrade freeway landscaping along the Black Canyon/Maricopa Freeway.

The City is implementing an In-Fill Program which provides incentives to encourage development of single-family homes on vacant property in the central part of the City. The program assisted with the construction of approximately 450 homes during 1996 and 1997. The City also assesses impact fees on new development in the northern and southern peripheral

areas of the City. Because these fees are not charged in other areas, they provide an incentive to locate development of vacant properties in the central portions of the City. (Resolution 18949, Measure 97-TC-14).

The Phoenix City Code was recently amended to prohibit parking on areas which are not dustfree. This amendment is included in Measure 97-DC-8a and is repeated below.

The Phoenix City Code, Chapter 39, Article II, Section 39-7, was amended in July 1997, to prohibit property owners from allowing vehicles to be parked on unpaved lots or any other surface which is not dustfree as defined in the City Zoning Code. The City Code also includes authority of the Neighborhood Services Department to issue citations to the property owner.

The Phoenix City Code, Chapter 36, Article XI, Section 36-145, was amended in July 1997, to prohibit vehicle owners from parking on surfaces which are not dustfree as defined in the City Zoning Code. This amendment to the City Code includes the authority for the Police Department to issue citations to the vehicle owner, and to impound vehicles in violation of this Code.

City of Phoenix, Neighborhood Services Department is the implementing City Department. Authority for implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities; Phoenix City Code, Chapter 39, Article 2, Section 39-7: Neighborhood Preservation; Phoenix City Code, Chapter 36, Article XI, Division I, Section 36-145: Vehicles and Traffic: Maricopa County Rule 310: Open Fugitive Dust Sources.

These projects are underway in 1997-1998 fiscal year. Funding is allocated through the annual budget process.

For weed abatement, City of Phoenix, in 1997, indicates that City of Phoenix programs to address weed abatement on existing lots are included in 11b.

Maricopa County Rule 310 requires property owners to apply permanent dustproofing measures after earthmoving activities such as blading or disking to remove weeds from vacant property. The City will continue to work cooperatively with Maricopa County to promote compliance with this rule. For example, the City will work with Maricopa County to evaluate the need for a system to contact the County when the City issues notices which require weed abatement for vacant property.

The City will work with other local governments to develop/educational material to inform property owners of the need to control dust on vacant lots. The materials will also encourage landscaping and other techniques

to reduce dust from vacant lots. Examples of the types of information methods include: articles in city newsletters, articles in employee newsletters, and information included in citations sent for weed control.

The City's Neighborhood Services Department and the Office of Environmental Programs will work with City staff and contractors who provide lot clean-up services and property demolition to increase awareness of Maricopa County Rule 310. In addition, mowing or other stabilization will be used for weed control conducted by the City.

Implementing City Departments include: City of Phoenix, Office of Environmental Programs; City of Phoenix, Neighborhood Services Department. Authority for implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities; Phoenix City Code, Chapter 39, Article 2, Section 39-8(D): Weeds, Bushes, Trees, and Other Vegetation.

Implementation will begin in 1997-1998 fiscal year. Funding is allocated through the annual budget process.

1998 City of Phoenix, in 1998, indicates that for:

City-Owned Lots: The City of Phoenix has funded a program to identify and stabilize City-owned vacant lots. The program includes an inventory of City-owned vacant property, a computerized tracking and mapping system for ongoing maintenance, site inspections, EPA approved testing of disturbed soils, stabilization products review, and stabilization services.

Private Lots: As noted in City Council Resolution 19006 (Measure 97-DC-10d), the City amended City Code Chapters 36 and 39 in 1997 to prohibit parking on any surface which is not dustfree.

The City has also assigned one full-time employee in the Neighborhood Services Department to work on dust control and enforcement issues for a minimum of one year. The staff will evaluate options for additional controls for vacant lots and parking lots. This work will include an evaluation of options for public education programs, review of current City ordinances, and review of options for enhanced enforcement programs.

Responsible City Departments include:

City Owned Lots: The Engineering and Architectural Services Department is responsible for managing the dust control project for stabilizing City-owned vacant lots. The Office of Environmental Programs will assist with the program.

Private Lots: The Neighborhood Services Department is responsible for enforcement of the parking ordinances and implementing the program to evaluate options for enhanced dust control from vacant lots and parking lots.

Authority for implementation includes; A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated; Phoenix City Code, Chapter 36, Article XI, Division I, Section 36-145: Vehicles and Traffic; Phoenix City Code, Chapter 39, Article 2, Section 39-7: Neighborhood Preservation; City of Phoenix Ordinance No. S-25438: Approving Citywide Paving and Soil Stabilization Projects.

The testing and stabilization of City-owned vacant lots is scheduled for completion during Fiscal Year 1998-1999. The enforcement of the 1997 City parking standard is in progress. The assignment of a Neighborhood Services Department inspector to work on dust control issues for a minimum of one year will begin in Fiscal Year 1998-1999.

City of Phoenix Ordinance No. S-25438 approves $5.8 million for stabilization of City-owned vacant lots and the paving of City-owned parking lots. Approximately $4.6 million of this budget is anticipated to be used for identification, testing, and stabilization of City-owned vacant lots. Approximately $50,000 has been approved for the NSD inspector during Fiscal Year 1998-1999. The Neighborhood Services Department and the Police Department enforce the City's parking ordinances.

1998 ■ Town of Queen Creek commits to adopt an ordinance to reduce particulate emissions from vacant disturbed lots by requiring several dust control measures as follows:

According to the Environmental Protection Agency (EPA) Moderate Area PM-10 Federal Implementation Plan (FIP), all of the following control measures must be implemented on vacant lots:

<u>Weed Abatement</u>:

- Apply dust suppressant(s) to the total surface area subject to disturbance prior or during the weed abatement;
- Prevent or eliminate material track-out onto paved surfaces and access points adjoining paved surfaces; and
- Apply dust suppressant(s), gravel, compaction or alternative control measures immediately following weed abatement to the entire disturbed surface area such that the surface is stabilized.

- Requirement applies to vacant lots with disturbed surfaces of 0.50 acres or greater.

Disturbed Surfaces:

- Any owner/operator of a disturbed vacant lot that remains vacant for more than fifteen days must either establish a ground cover vegetation on all disturbed surface areas, apply a dust suppressant to all disturbed surface areas, restore to a natural state, or apply and maintain surface gravel within 60 days.
- Requirement applies to vacant lots with disturbed surfaces of greater than 0.50 acres or greater.

Motor Vehicle Disturbances

- Any owner/operator of a disturbed vacant lot by motor vehicle or off-road motor vehicle use, or parking must either apply effective measures to prevent motor vehicle trespassing, or apply surface gravel or stabilizer to all disturbed surface areas.
- Requirement applies to vacant lots with disturbed surfaces of greater than 5,000 square feet.

The Town of Queen Creek Public Works and Code Enforcement Departments will implement this measure. Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council. The schedule for implementing this measure is the adoption of an ordinance by June 10, 2000. The current Public Works and Code Enforcement Department staff would be adequate to implement the measure. The Town administration will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. provide an approach for assurances that State and local committed measures will be adequately implemented.

1997 ■ City of Scottsdale, in 1997, indicates that the following Scottsdale Revised Code Sections permit property owners to install signs to prevent vehicle trespass on their vacant lots:

Section 17-111.1 states that "No person shall park or permit to be parked any motor vehicle for the purpose of sale upon any lot or area within the City which is unpaved..."
Section 17-123 states that "No person shall park a vehicle in any private parking area without the express or implied consent of the owner or person in lawful possession of such property." (NOTE: This provision was revised by Ordinance #2242 on May 15, 1989 to specifically include unimproved parking areas).

Section 17-123.1 states that property owners have the right to post signs restricting parking on their property.
Section 17-126 states that "it shall be unlawful to park a motor vehicle in a city park except in an area specifically designated for parking..."
Section 17-62 prohibits vehicle traffic on equestrian trails or easements.
Section 19-14 prohibits operation of any motor vehicle on private property or public property which is not specifically designated for vehicle use.
Section 46-20 authorizes the City to require of parking lot owners, the installation of suitable barriers where required.

For dustproofing after a disturbance, the City of Scottsdale, in 1997, indicates that Maricopa County Rule 310 requires dust control measures during and after the disturbance of vacant lots. One provision of Rule 310 requires the implementation of reasonably available control measures of a permanent nature to stabilize the disturbed surface areas so as to effectively prevent or minimize fugitive dust within eight months of the termination of dust generating activities. On March 31, 1997, the Scottsdale City Council passed Resolution #4752 entitled "Air Pollution from Earth Moving Activities - Cooperation with Maricopa County" stating the City's intent to work cooperatively with Maricopa County to control fugitive dust. The City of Scottsdale not only works cooperatively with Maricopa County, but is also required by the County rule to apply dustproofing on City owned vacant lots in compliance with this rule.

For establishing groundcover vegetation, the City of Scottsdale, in 1997, indicates that Maricopa County Rule 310 requires dust control measures after the disturbance of vacant lots, which include the option of establishing groundcover vegetation as a reasonably available control measure of a permanent nature to stabilize the disturbed surface areas so as to effectively prevent or minimize fugitive dust within eight months of the termination of dust generating activities. On March 31, 1997 the Scottsdale City Council passed Resolution #4752 entitled "Air Pollution for Earth Moving Activities - Cooperation with Maricopa County" stating the City's intent to work cooperatively with Maricopa County to control fugitive dust. The City of Scottsdale not only works cooperatively with Maricopa County, but is also required by the County rule to establish groundcover vegetation or other permanent dust control measures on City owned vacant lots in compliance with this rule.

For weed abatement methods, the City of Scottsdale, in 1997, indicates that Maricopa County Rule 310 requires dust control measures on vacant disturbed lots. One option is to establish groundcover vegetation. However, City ordinances control excessive weed growth on properties, the Fire Department requires weed abatement where it may present a fire hazard, and the FAA requires weed abatement in the vicinity of airport runways. The City will use mowing or other stabilization for weed control on its own facilities. The City will continue to distribute informational

materials on mowing for weed abatement provided by Maricopa County as part of the Rule 310 cooperative agreements.

The City will also cooperate with other local governments on the development of informational material to inform property owners of the need to control dust on vacant disturbed lots. The material will discourage property owners from using disking or blading as a means to control weeds and encourage landscaping or other stabilization techniques. Examples of the types of informational methods include: articles in utility bill inserts, employee newsletters, and information included in citations sent for weed control. The City will also cooperate with other local governments with strategies to coordinate with fire department officials, the FAA and other entities on requirements for weed abatement which overlap or conflict.

Authority of implementation includes: City of Scottsdale Code 1972; City of Scottsdale Ordinance #2242, May 15, 1989; City of Scottsdale Ordinance #1966, July 6, 1987; City of Scottsdale Ordinance #2330. December 12, 1990; City of Scottsdale Revised Code, Chapter 17, Article V; City of Scottsdale Revised Code, Chapter 46, Article II; City of Scottsdale Community Development, Code Enforcement; City of Scottsdale Police Department; Maricopa County Environmental Services Department; Scottsdale City Council Resolution #4752, March 31, 1997; Scottsdale City Council Resolution #4864, August 4, 1997; City of Scottsdale Community Development Department, Inspection Services Division Rural Metro Fire Department; FAA; and Proposed Cooperative Project with Other Valley Cities.

Implementation is in progress. Maricopa County Environmental Services Department enforces Rule 310; City of Scottsdale Community Development Department, Inspection Services Division distributes informational material on the County rule, responds to dust control complaints by citizens, issues orders to comply within City authority on nuisance complaints, etc. and tracks/reports number of citizen complaints responded to by City staff. Rural Metro requires fire breaks or weed abatement where fire hazards may exist; the FAA regulates airport operational requirements. Funding and personnel levels of implementation are allocated within the approved Biennial Budget for FY 1997-1999.

1998 City of Scottsdale, in 1998, indicates that this measure is designed to reduce particulate emissions from vacant lots with disturbed surface areas. Maricopa County Rule 310 and the Moderate Area PM-10 Federal Implementation Plan (FIP) require control measures on vacant lots that have disturbed surfaces of at least 0.50 acres or motor vehicle caused disturbance areas greater than 0.10 acres.

The City of Scottsdale commits to reduce particulate emissions from publicly owned vacant lots by stabilizing disturbed areas promptly using the dust control options outlined in the Moderate Area PM-10 FIP relating to vacant lots. The City will continue to enforce existing ordinance restrictions on parking vehicles and driving vehicles on vacant lots. During the period of July 1997 through July 1998, Code Enforcement inspectors logged approximately 800 cases related to dust from vacant lots and parking vehicles on unpaved areas. The City will assist owners of privately owned vacant lots by providing information and cooperation with Maricopa County on educational communication programs.

The City of Scottsdale commitments outlined in this measure are regarded as Best Available Control Measures (BACM) for particulate emissions.

The City of Scottsdale is responsible for implementing existing ordinances on vacant lot disturbance. Maricopa County is responsible for implementing Rule 310 Open Fugitive Dust Sources, which contains enforcement provisions. Legal authority for this measure is provided under A.R.S. Section 9-240, General Powers of Common Council. The City of Scottsdale is already implementing its ordinance relating to this measure. The City's Code Enforcement Division is adequately staffed and funded to implement City Code provisions relating to this measure. Maricopa County is responsible for enforcing Rule 310. The City of Scottsdale's Code Enforcement Division will enforce the City's nuisance ordinance and motor vehicle use on vacant property ordinance, on a complaint basis.

1997 ■ City of Surprise, in 1997, indicates that the Surprise Municipal Code will be amended by the City Council to include the following language:

> Property owners shall be required to install signs and barriers on vacant lots where there is evidence (complaints) of substantial vehicle traffic across or on lots and that traffic causes airborne dust.

This measure will be implemented by the City of Surprise Engineering Department. Legal authority for this action is provided under Sections 9-240 and 9-276 of Arizona Revised Statutes. This measure will be enforced by ordinance. The enforcement function will be staffed and administered under the Public Works Department and/or the Engineering Department, and by the Code Enforcement Division of the Surprise Police Department.

For weed abatement on vacant lots, the City of Surprise indicates that the Surprise Municipal Code will be amended by the City Council to include the following:

"Vegetation Maintenance" means any abatement of plant growth whether living or dead, including but not limited to grass and weeds, on non-agricultural property, shall be mowed rather than disked or plowed.

This measure will be implemented by the City of Surprise Public Works Department, Streets Division. Legal authority for this action is provided under Sections 9-240 and 9-276 of the Arizona Revised Statutes. This measure will be enforced by ordinance. The enforcement function will be staffed and administered under the Public Works Department and/or the Engineering Department and by the Code Enforcement Division of the Surprise Police Department.

1998 City of Surprise, in 1998, reiterates this commitment.

1997 ■ City of Tempe, in 1997, indicates that the existing Nuisance Ordinance provides for enforcement of this nature as a result of cars for sale or illegal dumping situations. Maricopa County Rule 310 requires property owners to apply permanent dustproofing measures after earthmoving activities on vacant lots. The City will continue to work cooperatively with the County to promote compliance with this rule.

A current effort underway in the Development Services Department to combine the existing Nuisance and Neighborhood Enhancement Ordinances to better facilitate proactive enforcement and consistent citation powers will provide additional support in meeting the City's planned PM-10 commitments dealing with dust-causing activities on privately owned vacant lots and/or residential parking situations. A review will also be done to determine the necessity of expanding the ordinance to cover any unpaved lot, whether residential or commercial.

The Development Services Department is the implementing City Department. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

Regarding weed abatement on vacant disturbed lots, the City of Tempe indicates that Maricopa County Rule 310 requires property owners to apply permanent dustproofing measures after earthmoving activities on vacant lots, including activities such as blading or disking when it is used for weed abatement. The City will continue to work cooperatively with the County to promote compliance with this Rule. Mowing or other methods of stabilization will be encouraged by both the County and City in lieu of disking.

Staff has not identified any vacant lots in Tempe that could not be mowed because of rocks or other obstacles. Mowing will be encouraged by both the County and City whenever possible, such as through information included in notices for abatement to property owners.

The Development Services Department and Fire Department are the implementing City Departments. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1998 City of Tempe, in 1998, indicates that fugitive dust emissions may be generated by wind erosion of vacant disturbed land and by vehicles trespassing on vacant lots. Steps to eliminate activity on vacant land and reducing dust on vacant lots can reduce PM-10 emissions from these sources.

The City of Tempe commits to adopt a fugitive dust ordinance patterned after the Maricopa County Rule 310. Some key control measures planned to be included in this ordinance are as follows:

> Any owner/operator of a disturbed vacant lot that remains vacant for more than 15 days must stabilize those lot surfaces through the use of dust palliatives, gravel, or other approved methods for dust control.
>
> If a vacant lot is disturbed by motor vehicle or off-road motor vehicle use or by parking, the owner/operator must either apply effective measures to prevent motor vehicle trespassing, or apply surface gravel or stabilizers to all disturbed surfaces.
>
> Weed abatement activities on vacant lots will require the use of dust suppressants before or during the weed abatement operation, and stabilization of the lot surfaces will be required once abatement activities are completed. Mowing instead of disking will be encouraged.

The Development Services Department, Public Works Department and Police Department are the implementing City Departments. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson , in 1997, indicates in Resolution No. 794 that the City will proceed with a good faith effort to implement measures to reduce particulate emissions from vacant disturbed lots. The measure options include: Option 1: Requiring property owners to install signs and barriers

where there is evidence of vehicle trespassing on existing vacant lots. Option 2: Applying dustproofing measures after incidence of disturbance on existing vacant lots. Dustproofing measures include application of gravel and barriers (in combination), stabilizers, and application of gravel (alone). Option 3: Establishing groundcover vegetation on existing vacant lots which is the purposeful selection of plants to control dust. Option 4: Restricting vehicle owners from parking on all existing unpaved surfaces.

For weed abatement on vacant disturbed lots, the City of Tolleson, in 1997, indicates in Resolution No. 794 that the City will proceed with a good faith effort to implement measures to reduce particulate emissions. The measure options include: Option 1: Requiring mowing for weed abatement on all existing lots. Option 2: Requiring mowing for weed abatement on existing lots that can be mowed and requiring fire breaks and boundaries on existing vacant disturbed areas that cannot be mowed.

1998 City of Tolleson, in 1998, indicates that Ordinance No. 364, Section 9-3-4 Weeds, Bushes, Trees and Other Vegetation in the Tolleson City Code will be amended to include the requirements within the EPA Proposed Moderate Area PM-10 Federal Implementation Plan listed in the Description of Local Government PM-10 Measures. Amendments to this ordinance will be implemented no later than June 10, 2000. Currently, the majority of the vacant lots in Tolleson are being farmed, are bounded, or are about to undergo development.

The City of Tolleson Public Works and Safety Services Departments will oversee compliance to this proposed amendment under the authority given by the Tolleson City Council, A.R.S. Section 9-240, General Powers of Councils. Adoption and implementation of this proposed amendment to City Code Ordinance No. 364 Section 9-3-4 will take place no later than December 31, 1998. The Safety Services Department will enforce this amendment. General fund monies will cover publication expenses, legal fees, and the salaries of enforcement officials. Once this amendment is in place, Safety Services Building Inspectors will perform inspections at will to ensure compliance and report any violations, as well as any action taken against violators, to the Zoning Administrator (City Manager).

1998 ■ Town of Youngtown commits to adopt either of the following three ordinance alternatives to reduce particulate emissions from vacant disturbed lots addressing vehicular disturbance and weed abatement measures.

Vehicular Disturbance - Alternative #1: The Town of Youngtown commits to adopt an ordinance prohibiting vehicular use on a vacant lot of 5,000

square feet or greater, unless authorized by the owner of the vacant lot. If authorization is granted by the owner of the vacant lot, a temporary parking permit will be required from the Town of Youngtown, provided the permit is conditioned to require that the parking surface be dustproofed within three months. If a vacant lot is disturbed by motor vehicle or off-road motor vehicle use or parking, the owner/operator must either apply effective measures to prevent motor vehicle trespassing, or apply surface gravel or stabilizer to all disturbed surface areas within sixty days. This Vehicular Disturbance-Alternative #1 effectively prohibits property owners from allowing vehicles to be parked on unpaved lots that are not dust-free. The Police Department and Code Enforcement are responsible for enforcement and issuing citations to the property owner. Further, the Police Department/Code Enforcement may remove and impound any vehicle parked or stored in violation of this section. The authority for removing these vehicles is provided in the Youngtown Town Code.

Vehicular Disturbance - Alternative #2: The Town of Youngtown commits to adopt an ordinance prohibiting vehicular use on any vacant lot of 5,000 square feet or greater, unless it is dustfree. Vehicular Disturbance-Alternative #2 to be enforced by the Police Department, effectively prohibits vehicle owners from parking on surfaces that are not dustfree. Violation of this section constitutes a civil traffic violation. Civil sanctions may be issued.

Weed Abatement: This measure also involves reducing particulate emissions from vacant disturbed lots by adopting an ordinance requiring several dust control measures as follows:

According to the Environmental Protection Agency (EPA) Moderate Area PM-10 Federal Implementation Plan (FIP) (August 3, 1998), all of the following control measures must be implemented for weed abatement activities on vacant lots:

- Apply dust suppressant(s) to the total surface area subject to disturbance prior to or during the weed abatement;
- Prevent or eliminate material track-out onto paved surfaces; and
- Apply dust suppressant(s), gravel, compaction or alternative control measure immediately following weed abatement to the entire disturbed surface area such that the surface is stabilized.

In addition, any owner/operator of a disturbed vacant lot that remains vacant for more than fifteen days must either establish a ground cover vegetation on all disturbed surface areas, apply a dust suppressant to all disturbed surface areas, restore to a natural state, or apply and maintain surface gravel to stabilize all disturbed surfaces.

The Town of Youngtown has twenty-eight estimated number of acres of existing vacant disturbed lots that will be treated by January 1, 2000 using each of the dustproofing techniques (i.e., signs and barriers, gravel and barriers, stabilizers, gravel, vegetation, restricted parking).

This measure will be implemented by the Town of Youngtown. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils, and A.R.S. 9-500.04(A)(3), as created under Senate Bill 1427. The control measures must be implemented within eight months following the effective date of the FIP or within sixty days following the disturbance, whichever is later. No additional personnel is expected to be required. The Town of Youngtown Police/Code Enforcement Department will be responsible for enforcing this measure by enforcing the ordinance for noncompliance. The Town of Youngtown Public Works Department will track the progress made with the implementation of this measure.

1997 ■ Maricopa County, in 1997, indicates that to address existing vacant disturbed lots in the unincorporated areas of the county within the PM-10 nonattainment area, the Maricopa County Board of Supervisors is directing the Environmental Services Department to develop an implementation policy with a compliance schedule to proactively apply existing fugitive dust requirements to vacant lots 10 acres or greater in size. The program currently operates on a complaint response basis countywide. Maricopa County Air Pollution Control Rule 310 - Open Fugitive Dust Sources, Section 305 (section number may shift in future revision) requires owners of vacant lots or urban or suburban open areas to implement control measures to prevent or mitigate dust if motor vehicles drive on or use the lot. Sign and barriers are among the control measures listed in the rule owners may choose to implement.
The applicable sections of Rule 310 are Section 308 which requires the implementation of control measures when disturbing soil and Section 309 which requires the owners of vacant lots which remain unused and developed to implement control measures (section numbers may shift in future revisions). Gravel and barriers, stabilizers, and gravel alone are among the control measures listed in the rule owners may choose to implement. Groundcover is also among the control measures listed in the rule owners may choose to implement.

The Maricopa County Sheriff's Office responds to complaints by property owners and may issue a citation after a reasonable request to leave is provided to the vehicle driver trespassing on the property. The Maricopa County Board of Supervisors is authorized by A.R.S., Section 49-479 to adopt rules for air pollution control and by A.R.S., Section 49-480 to establish, administer and enforce a program for air quality permits. The

Board adopted rules establishing an air quality permit program and pursuant to A.R.S., Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S., Section 49-471, the executive head of the department designated under A.R.S., Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S., Sections 49-502, 49-511, 49-512 and 49-513. The Maricopa County Sheriff's Office enforces A.R.S., Section 13-1502 regarding criminal trespass in the State's criminal code.

The schedule for implementation is:

November-December 1997	Develop implementation policy
January 1998	Workshop draft policy
February 1998	Board consideration of policy
September -November 1998	Conduct survey to identify sites
December 1998	Initiate notification process and establish a compliance schedule

An additional two field FTE and one support FTE will identify affected sites, provide notice, establish a compliance schedule and follow-up milestones. Personnel, supplies and outreach for this program are expected to be funded by approximately $100,000 in FY 1999. Criminal code enforcement is an ongoing program funded through the existing budget for the Sheriff's Office. The Rule 310 requirements will be administered through a field inspection program to identify affected sites and provide notification. The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. Criminal trespass in the third degree is classified as a class 3 misdemeanor.

For weed abatement on vacant disturbed lots, Maricopa County, in 1997, indicates that most weed abatement methods disturb soils. Maricopa County Air Pollution Control Rule 310-Open Fugitive Dust Sources, Section 308 (section number may shift in future revision) requires a person disturbing soils to implement control measures to prevent or minimize dust. Based on recommendations from the Joint Regional Program Committee, as an incentive, Maricopa County is revising Rule 310 to specifically exempt mowing and cutting for weed abatement which leaves the stubble in place to minimize windblown dust. Other methods such as disking or balding which disturb the surface will remain subject to Rule 310. Mowing, cutting, hand removal or other stabilization will be used for weed control conducted by Maricopa County.

Maricopa County is in the process of developing a hazardous weed abatement ordinance. Once in place, Planning and Development Department staff will include information encouraging mowing and providing information on Rule 310 with the written notice requiring weed abatement to the owner/operator. In addition, staff will notify the Environmental Services Department when notices are issued which require weed abatement.

The statutory authority to adopt and enforce Rule 310 is the same as described in Measures 19 and 20. A.R.S., Section 11-251, General Powers of Board of Supervisors, for weed control conducted by Maricopa County; A.R.S., Section 11-268, (Removal of rubbish, trash, weeds, filth, debris and dilapidated buildings), to adopt and enforce a hazardous weed abatement ordinance. The schedule for implementation is:

Rule 310:	May - August 1997	Research and draft revisions
	September - November 1997	Workshop draft revisions
	January - February 1997	Board consideration of revisions.
Hazardous Weed Abatement Ordinance:		The hazardous weed abatement ordinance is scheduled for consideration by the Board of Supervisors in 1997.

The Maricopa County Environmental Services Department has 16, inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. Funding is provided by the existing Environmental Services Department budget. Funding is provided by the existing Planning and Development Department budget through the Hazardous Weed Abatement Ordinance Process.

Rule 310 requirements are administered through a permit program which includes a review of permits, inspection of facilities, source test of equipment and review of records and activities. The Control Officer's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. Hazardous Weed Abatement Ordinance requirements will be administered through a field inspection program and written notices. The Planning and Development Department Director's enforcement options filing a class 1 misdemeanor citation and assessment of all costs for the removal of the weeds and dilapidated buildings.

1998 ■ Arizona Department of Transportation indicates dust emissions may be generated by wind erosion of vacant disturbed land and by vehicles trespassing on vacant lots. Steps to eliminate activity on vacant land and reduce dust on vacant lots can reduce PM-10 emissions from this source.

There is a new proposed federal requirement which pertains to this measure. The proposed PM-10 Federal Implementation Plan (FIP), that will be finalized in July 1998, contains three main requirements for vacant lots: 1: A Dust Control Plan is required for weed abatement operations on vacant lots that disturb .10 acres or more of soil by blading, disking, plowing under or other means (excluding mowing, cutting or similar processes in which soil is not disturbed), unless such operations receive an approved permit from the Maricopa County Environmental Services Department. 2: Any owners/ operators of an urban or suburban open area vacant lot with .10 acres or more of disturbed surface which is unused or undeveloped for more than 15 days are required to establish vegetation, apply dust suppressants, restore to a natural state, or apply gravel to all disturbed surfaces within eight months following the final rule or within eight months following the initial 15 day period of inactivity, whichever is later. 3: Any owner/operators of an urban or suburban open area vacant lot which has a disturbed surface due to motor vehicles (including off-road vehicles) are required to place signs, fencing, shrubs, trees, or cement barriers to prohibit entry along the access perimeter. Since this is a Moderate Area FIP, the Environmental Protection Agency EPA considers this to be a Reasonably Available Control Measure. The final FIP will contain modifications to the EPA criteria for vacant lots as shown in the proposed FIP, i.e., .10 acres will be increased to 0.50 acres.

This measure would be implemented by the Arizona Department of Transportation (ADOT). Legal authority of this action would be A.R.S., 49-406 and A.R.S. 28-7095. A review of land owned by ADOT has shown a wide range of circumstances that govern the existing and end use of those lands. Based on the definitions of Urban and Suburban Open Areas and Vacant Lots as shown in the April 1, 1998 Federal Register Proposed Rule, ADOT will develop a deliberate action plan and complete a site inventory of the lands to clarify each site's characteristics. Following the completion of the site inventory, ADOT will review available options for identified sites for compliance, if any, and will evaluate the economic and resource feasibility for any further actions. A report will be completed for ADOT Management for review and staging action.

Based on availability, existing ADOT personnel would conduct the on-site inventories and prepare a report for ADOT Management review and staging action. Existing federal and state laws, competing priorities for limited resources, staff time, and the limited data base represent barriers to the completion of the on-site inventory. ADOT, through the Transportation

Planning Group Senior Transportation/Air Quality Planner, will develop a deliberate action plan that includes conducting an on-site inventory of land owned by ADOT in the Maricopa County PM-10 nonattainment area. A report will be completed on those sites for ADOT Management review and staging action.

47. Dust Control Plans for Construction/Land Clearing and Industrial Sites (Including Active Landfills), With Elements Addressing Trackout Prevention, Site and Material Maintenance, Construction Staging, and High Wind Operating Restrictions

1997 ■ Maricopa County indicates that this measure involves requiring dust control plans for construction, demolition, land clearing, and industrial projects. Dust control plans are an element of Maricopa County's fugitive dust program described in the measure, Strengthening and Better Enforcement of Fugitive Dust Control Rulers 97-DC-1. Credit for the fugitive dust program including dust control plans will be taken under Measure 22, Strengthening and Better Enforcement of Fugitive Dust Control Rules.

48. Dust Abatement and Management Plan for State Lands

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which appropriated $200,000 from the State General Fund to the State Land Department for implementing a Dust Abatement and Management Plan to include measures to control particulate pollution on State Trust Lands in Area A. The plan may include measures to close areas to illegal use by off-highway vehicles, closing roads that are unused or illegal, and increasing the enforcement of no trespassing areas (Section 36 of S.B. 1427).

49. Agricultural Best Management Practices

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which includes Best Management Practices for Agriculture to reduce particulate emissions. The legislation established a Best Management Practices Committee for Regulated Agricultural Activities appointed by the Governor. The Committee is composed of: the Director of the Arizona Department of Environmental Quality; Director of the Arizona Department of Agriculture; Dean of the College of Agriculture of the University of Arizona; State Director of the United States Natural Resources Conservation Service; five people actively engaged in the production of citrus, vegetables, cotton, alfalfa, and grain; and one soil taxonomist from the University of Arizona College of Agriculture. The term of membership is six years and members may be reappointed.

By June 10, 2000, the Best Management Practices Committee will adopt by rule an agricultural general permit specifying best management practices for regulated agricultural activities to reduce PM-10 particulate emissions. The

ADEQ Director will then submit the rule to the U.S. Environmental Protection Agency as a revision to the State Implementation Plan within sixty days of adoption. As defined by state law, an agricultural general permit means best management practices that reduce PM-10 particulate emissions from tillage practices and from harvesting on a commercial farm; from those areas of a commercial farm that are not normally in crop production; and from those areas of a commercial farm that are normally in crop production including prior to plant emergence and when the land is not in crop production. Best management practices are defined as techniques verified by scientific research, that on a case-by-case basis are practical, economically feasible and effective in reducing PM-10 particulate emissions from a regulated agricultural activity.

The Best Management Practices Committee will also adopt by rule a list of best management practices, at least one of which will be used to demonstrate compliance with the agricultural general permit no later than December 31, 2001. The legislation acknowledges that the best management practices may vary within the Maricopa PM-10 particulate nonattainment area according to regional or geographical conditions or cropping patterns.

A person engaged in a regulated agricultural activity on the effective date of this act (August 21, 1998) is required to comply with the agricultural general permit by December 31, 2001. A person who begins a regulated agricultural activity after December 31, 2000 is required to comply with the general permit within eighteen months of beginning the activity.

If the ADEQ Director determines that a person engaged in a regulated activity is not in compliance and has not previously been subject to a compliance order, the Director may serve an order requiring compliance with the general permit and notifying the person of the opportunity for a hearing. The order will specify the nature of the noncompliance and that the person has a period that the Director determines is reasonable, but is not less than six months, to submit a plan that specifies best management practices from among those adopted by rule for the general permit to the Supervisors of the Natural Resources Conservation District (NRCD) in which the person engages in the regulated activity.

However, if the ADEQ Director determines that a person engaged in a regulated activity is not in compliance with the general permit and has previously submitted a plan to the NRCD, the Director may serve an order requiring compliance with the general permit and notifying the person of the opportunity for a hearing. The order will specify the nature of noncompliance and that the person has a period that the Director determines is reasonable, but not less than six months, to submit a plan to the Arizona Department of

Environmental Quality that specifies the best management practices from among those adopted for the general permit.

If a person fails to comply with the plan submitted to the Arizona Department of Quality, the ADEQ Director may revoke the agricultural general permit and require that the person obtain an individual permit under 49-426. A revokation becomes effective after the Director has provided the person with notice and an opportunity for a hearing.

Periodically, the Committee may reexamine, evaluate, and modify best management practices. Approved modifications will be submitted to the Environmental Protection Agency. The Committee will also develop and begin an education program by June 10, 2000.

50. PM-10 Efficient Street Sweepers

1999 ■ City of Avondale indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentrated areas where a significant source of emissions is vehicle reentrainment.

The City of Avondale will review the results of MAG PM-10 Efficient Street Sweeping Test. If the City determined that the PM-10 efficient street sweeping units are economically and technologically feasible, the City will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as they are retired. Presently, the City owns one street sweeper and contracts for other sweepers when necessary.

This measure will be implemented by the City of Avondale Public Works Department and Equipment Management Department. Legal authority for this action is provided under A.R.S. 9-240 "General Powers of Common

Council". The schedule for implementing this measure is dependent upon the development of the certification standard and certifications of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test, and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary time line is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers so to replace older equipment, as they are retired.

The Maricopa Association of Governments has allocated $70,000 for a PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Avondale is willing to provide one employee to participate in the MAG street sweeping test. The City administration will oversee the implementation of this measure.

1998 ■ Town of Carefree indicates that this measure involves consideration by the Town to utilize PM-10 efficient street sweepers to reduce particulate emissions from paved roads. The Town of Carefree will review the results of the MAG PM-10 Efficient Street Sweeping Test to determine if it is economically and technologically feasible to utilize a PM-10 efficient sweeper. Currently, the Town of Carefree contracts to have one mile of streets swept bi-weekly. The Town Street Department staff will review sweeping test results. The Town of Carefree will oversee the implementation of this measure.

1998 ■ City of Chandler indicates that this measure involves the potential use of PM-10 efficient street sweepers to reduce particulate emissions. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient street sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but will not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test will be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The City of Chandler Public Works Department will review the results of the MAG PM-10 efficient street sweeping test and make a recommendation to the Chandler City Council for a determination as to the feasibility of using PM-10 efficient street sweepers in the City. If the City determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the City owns five street sweepers.

Legal authority for this action is provided under A.R.S. 9-240, General Powers of Common Council and A.R.S. 9-500.04, Air Quality Control; Definition. The schedule for implementing this measure is dependent upon: (1) the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE and the South Coast Air Quality Management District; (2) the results of the MAG PM-10 efficient street sweeping test; and (3) the City's evaluation of the certification standards developed and the results of the MAG test. It is anticipated that the City will make its determination of economic and technological feasibility on or before December 2002. If implementation is determined to be feasible, the City will begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

MAG has allocated $70,000 for the PM-10 efficient street sweeping test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Chandler will provide adequate personnel to participate in, and evaluate the results of, the MAG street sweeping test. Funding for acquisition of street sweepers is allocated through the annual budget process. In the event that the City of Chandler determines that the purchase of PM-10 efficient street sweepers is feasible, the City of Chandler Public Works Department will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. grants Maricopa County and the Arizona Department of Environmental Quality (ADEQ) the authority to enforce measures defined in the Nonattainment Area Plans.

1998 ■ City of El Mirage indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The City of El Mirage will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the City of El Mirage determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City of El Mirage will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the City of El Mirage contracts with a private vendor to sweep 9.5 miles of streets each year.

This measure will be implemented by the City of El Mirage Public Works Department. Legal authority for this action will be provided under A.R.S. Section 9-240. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided as follows:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweeper or contract with another

municipality or vendor which would employ a PM-10 efficient unit.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of El Mirage will provide one full-time equivalent employee to participate in the MAG street sweeping test.

1998 ■ Town of Fountain Hills indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Town of Fountain Hills will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the Town of Fountain Hills determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the Town of Fountain Hills will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the Town of Fountain Hills owns one street sweeper which will be replaced by December 1998.

This measure will be implemented by the Town of Fountain Hills Street Maintenance Department. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils.

The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street

Sweeping Test by the Town. Therefore, a preliminary timeline is provided as follows:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweeper to replace older equipment, as it is retired, or contract with another municipality or vendor which would employ a PM-10 efficient unit.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The Town of Fountain Hills will provide one employee to participate in the MAG street sweeping test.

1998 ■ Town of Gilbert indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient street sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, noise level, water usage (if applicable), transport speeds, and available literature on PM-10 efficient street sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Town of Gilbert will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the Town of Gilbert determines the PM-10 efficient street sweeping units are economically and technologically feasible, the Town of Gilbert will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the Town owns three

street sweepers. This measure will be implemented by the Town of Gilbert Public Works Department. Legal authority for this action is provided under A.R.S., Section 9-240: General Powers of Common Council.

The schedule for implementing this measure is dependent upon the development of the certification standards and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the Town. Therefore, a preliminary timeline is provided:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and the South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

MAG has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The Town of Gilbert will participate in the development of operational parameters and the evaluation of the test results. The Town's Public Works Department will oversee the implementation of this measure.

1998 ■ City of Glendale indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from public paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10

concentration areas where a significant source of emissions is vehicle reentrainment.

The City of Glendale will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the City of Glendale determines that the PM-10 efficient street sweeping units are economically and technologically feasible on public streets, the City of Glendale will purchase, lease, or contract to procure the PM-10 efficient units to replace older street sweeping equipment, as it is retired. Presently, the City owns eight street sweepers that are used for maintaining City streets. This measure will be implemented by the City of Glendale's Streets Division. Legal authority for this measure are provided under A.R.S. 9-240 General Powers of Common Council and the Glendale Charter.

The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Glendale will participate in the MAG street sweeping test. The Deputy City Manger of Public Works will oversee the implementation of this measure.

1998 ■ City of Goodyear indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentrated areas where a significant source of emissions is vehicle reentrainment.

The City of Goodyear will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the City determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the City owns one street sweeper and contracts for other sweepers when necessary.

This measure will be implemented by the City of Goodyear Public Works Department. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Common Council. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG Pm-10 Efficient Street Sweeping Test, and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Goodyear is willing to provide one employee to participate in the MAG street sweeping test. City administration will oversee the implementation of this measure.

1999 ■ City of Mesa indicates that PM-10 efficient street sweepers have been proposed as a measure to reduce PM-10 sources on paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186 (that requires the use of PM-10 efficient street sweepers in some situations). The CARB and SAE standards have not yet been finalized.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage, (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is from vehicles driving over particulates on the street (vehicle reentrainment).

1. The City of Mesa will review the results of the MAG PM-10 Efficient Street Sweeping Test.

2. If the City of Mesa determines that the PM-10 efficient street sweeping units are economically and technological feasible, the City of Mesa will purchase, lease or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the City owns five street sweepers that are used on residential streets. Sweeping of arterial streets is conducted under contract.

3. If the City of Mesa determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City of Mesa will consider requiring that only PM-10 efficient contract street sweepers be utilized upon the expiration of existing contracts when the City enters into new service contracts to sweep City streets.

4. If the City of Mesa determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City of Mesa will consider an ordinance requiring the use of PM-10 efficient street sweepers used by private parties on private property.

The City of Mesa Public Works Department will implement this measure. Implementation authority is found in: A.R.S., Section 9-240 General Powers of Councils. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air

Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	City of Mesa determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Mesa will provide technical staff support to participate in the MAG street sweeping test. Possible procurement of PM-10 efficient street sweepers in the future will be considered through the annual budget process. The Public Works Department will oversee the implementation of this measure.

1998 ■ The Town of Paradise Valley indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

One the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Town of Paradise Valley will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the Town of Paradise Valley determines that the PM-10 efficient street sweeping units are economically and

technologically feasible, the Town of Paradise Valley will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the Town of Paradise Valley owns three street sweepers, leases zero, and contracts for zero.

The Town of Paradise Valley Public Works Department will implement this measure. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Common Council. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning work Program and Annual Budget. The Town administration will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. provide an approach for assurances that State and local committed measures will be adequately implemented.

1998 ■ City of Peoria indicates that this measure involves the use PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions

in the Maricopa County nonattainment area. The test may include, but not limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentrated areas where a significant source of emissions is vehicle reentrainment. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Peoria will provide one employee to participate in the MAG street sweeping test. The City Administration will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. provide an approach for assurance that State and local committed measures will be adequately implemented.

1998 ■ City of Phoenix will assign staff to participate in the Maricopa Association of Governments (MAG) Feasibility Study for PM-10 Efficient Street Sweepers. The study will be conducted after the sweepers are certified by the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB(. The City staff will attend meetings, assist in the design of the study, and provide assistance in reviewing draft reports. City staff will review the results of the study, and will prepare a report to Council regarding the recommendations as to whether the equipment is considered to be economically and technically feasible for any portion of the City's street sweeping program. The City currently operates approximately 21 street sweepers and sweeps approximately 7,100 curb miles of city streets.

Staff from the Street Transportation Department and the Office of Environmental Programs will participate in the MAG study and will work

together to prepare the report and recommendations to the Council. Authority for implementation includes: A.R.S., Section 9-240, General Powers of Councils; Arizona Constitution, Article 13, Section 2; Charter and Code of Phoenix AZ, Chapter II, General Powers, Rights, and Liabilities; Phoenix Charter, Chapter 4, Section 2: Powers Enumerated.

The schedule for implementing this measure is dependent upon the development of the certification standard and the certification of PM-10 efficient street sweeping equipment by SCAQMD and CARB and the results of the MAG PM-10 Efficient Street Sweeping Test. The City staff recommendation to Council is expected to be completed within six months of the MAG Feasibility Study final report.

The measure will be implemented with existing staff in the Street Transportation Department and the Office of Environmental Programs. The MAG has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Phoenix staff will participate in the MAG street sweeping test.

1998 ■ Town of Queen Creek indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited too, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Town of Queen Creek will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the Town of Queen Creek determines that the PM-10 efficient sweeping units are economically and technologically feasible, the Town of Queen Creek will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the Town of Queen Creek owns zero street sweepers, leases zero, and is in the process of selecting a contractor for street sweeping.

This measure will be implemented by the Town of Queen Creek Public Works Department. Legal authority for this action is provided under A.R.S. 9-240: General Powers of Common Council. The schedule for implementing this measure is dependent upon the development of the certification standard for PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the Town. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The Town administration will oversee the implementation of this measure.

1998 ■ City of Scottsdale indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from public paved roads with curbs. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.
Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but is not limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The City of Scottsdale will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the City of Scottsdale determines that the PM-10 efficient street sweeping units are economically and technologically feasible on public streets, the City of Scottsdale will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. This measure is regarded as a Best Available Control Measure (BACM) for particulate emissions. Presently, the City owns six street sweepers. Two of these sweepers are vacuum type units.

The City of Scottsdale Field Services Division will implement this measure. Legal authority for this measure is provided under A.R.S. 9-240: General Powers of Common Council. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City of Scottsdale. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Scottsdale will participate in the MAG Street Sweeping Test. The Municipal Services Department will oversee the implementation of this measure. Funding for replacement of equipment occurs in the Biennial Budget process.

1998 ■ City of Surprise indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

To assist in this review process, the City of Surprise has purchased one Elgin "Crosswind" vacuum based street sweeper. This PM-10 efficient unit replaced an older "brush" type vehicle and currently is the only municipally owned unit in operation. This unit and its operator currently clean all city owned streets bi-monthly. Results of the use of this equipment will be available for review by MAG and EPA and for certification purposes.

This measure has been implemented by the City of Surprise Public Works Department. Legal authority for this action is provided under A.R.S. 9-240 and 9-276. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided as follows:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired, or contract with another municipality or vendor which would employ a PM-10 efficient unit.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. No additional cost will be incurred until after a review of the project has been completed. The City of Surprise Public Works Department will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. provide an approach for assurances that State and local committed measures will be adequately implemented.

1998 ■ City of Tempe indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from public paved roads. The South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE to develop a test protocol for certification of these sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the capabilities of the certified sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The City of Tempe will review the results of the MAG PM-10 Efficient Street Sweeping Test. If Tempe determines the PM-10 efficient units are economically and technologically feasible, it will purchase, lease, or contract to procure such units to replace older equipment as it is retired. The City owns seven street sweepers.

Public Works Department is the implementing City Department. The authority for implementation includes: A.R.S.,Section 9-240, General Powers of Council; Code of Tempe, Arizona. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by Tempe. Therefore, a preliminary timeline is as follows:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test completed.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Tempe will provide one full time equivalent employee to participate in the MAG street sweeping test.

1998 ■ City of Tolleson, in 1998, commits to increasing the number of miles swept per year from 300 to 600. Furthermore, once the CARB standards for PM-10 certification are set, the City of Tolleson will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the City of Tolleson determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the City of Tolleson will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the City of Tolleson owns one street sweeper.

The City of Tolleson Public Works Department will implement this measure. Legal authority for this action is provided under A.R.S. 9-240 General Powers of Councils. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment; results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the City. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The City of Tolleson will provide one full time equivalent employee to participate in the MAG street sweeping test. The City administration will oversee the implementation of this measure.

1998 ■ Town of Youngtown indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient

street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient street sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Town of Youngtown will review the results of the MAG PM-10 Efficient Street Sweeping Test. If the Town of Youngtown determines that the PM-10 efficient street sweeping units are economically and technologically feasible, the Town of Youngtown will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. Presently, the Town of Youngtown owns one street sweeper which could be replaced with a PM-10 efficient unit, or, the Town of Youngtown may contract with another municipality or vendor which would employ a PM-10 efficient unit, to sweep 13.25 miles of streets each year.

This measure will be implemented by the Town of Youngtown's Public Works Department. Legal authority for this action will be provided under A.R.S. 9-240, General Powers of Councils. The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by the Town. Therefore, a preliminary timeline is provided as follows:

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure PM-10 efficient street sweeper to replace older equipment, as it is retired, or contract with another municipality or vendor which would employ a PM-10 efficient unit.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. The Town of Youngtown will provide one full-time equivalent employee to participate in the MAG Street Sweeping Test. The Town of Youngtown Public Works Department will oversee the implementation of this measure. In addition, A.R.S. 49-406 I. and J. provide an approach for assurance that State and local committed measures will be adequately implemented. The Town of Youngtown Public Works Department will track the progress made with the implementation of this measure.

1999 ■ Maricopa County, revised 1999 commitment, indicates that this measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operation parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Maricopa County Department of Transportation (MCDOT) will review the results of the MAG PM-10 Efficient Street Sweeping Test. If MCDOT determines that the PM-10 efficient street sweeping units are economically and technologically feasible, MCDOT will purchase, lease or contract to procure the PM-10 efficient units to replace older equipment, as it is retired. MCDOT independently purchased three interim technology PM-10 efficient sweepers and deployed in full time use for operational experience and short-term PM-10 improvements. The purchased sweepers passed the South Coast Air Quality Management District Certification Standards and were certified in 1999. Presently MCDOT owns five mobile street sweepers including the three PM-10 efficient street sweepers. This measure will be implemented by MCDOT. Legal authority for this action is provided under A.R.S. 11-251 General Powers of Board of Supervisors.

The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping Test by MCDOT. Therefore, a preliminary time line is provided.

By December 1998	Purchase of two interim technology PM-10 efficient sweepers to deploy in full time use for operational experience and short term PM-10 improvements.
By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility. If feasible, begin to procure additional PM-10 efficient street sweepers to replace older equipment as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. MCDOT will oversee the implementation of this measure. In addition, A.R.S. 49-406 J. provides an approach for assurances that State and local committed measures will be adequately implemented. MCDOT will track the progress made with the implementation of this measure. On an annual basis, MCDOT will provide Maricopa County Environmental Services Department with information on the progress made with implementation. Maricopa County is the entity responsible for reporting reasonable further progress to the U.S. Environmental Protection Agency.

1999 ■ Maricopa Association of Governments indicates that this measure provides funds to encourage the purchase and utilization of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. The objective of this measure is to accelerate the deployment of PM-10 efficient units to sweep roads in the Maricopa County nonattainment area which have heavy silt loadings.

On December 8, 1999, the Maricopa Association of Governments Regional Council approved an amendment to the FY 2000-2004 MAG Transportation Improvement Program (TIP) to allocate approximately $3.8 million in Congestion Mitigation Air Quality (CMAQ) funds to purchase PM-10 certified street sweepers. On November 23, 1999, the MAG Transportation Review Committee recommended an additional $1.9 million in CMAQ funds be allocated to purchase PM-10 certified sweepers in the FY 2001-2005 TIP.

It is anticipated that the FY 2001-2005 TIP will be approved by the Regional Council during the Summer of 2000, after completion of the conformity determination.

For each fiscal year CMAQ funds are allocated for street sweepers, MAG will solicit requests for funding of PM-10 certified units from entities in the PM-10 nonattainment area. The funding requests will identify the number of centerline miles to be swept, expected frequency of sweeping, and average daily traffic, if available. This data will be collected by facility type (i.e. freeway, arterial/collector, local) for roads to be swept with the PM-10 certified units. MAG will estimate the emissions reduction for each sweeper requested and rank the requests in priority order of effectiveness for consideration in the allocation of CMAQ funds.

In 2000-2001 MAG will also coordinate a test to assess the applicability of sweepers recently certified by the South Coast Air Quality Management District to specific conditions in the Maricopa County nonattainment area. The test may include, but is not limited to, an evaluation of operational parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test will be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment. The test will also be designed to address the operational concerns of the entities. MAG has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the FY 1999 Unified Planning Work Program and Annual Budget.

The Maricopa Association of Governments will be responsible for allocating the CMAQ funds to purchase PM-10 certified street sweepers, based upon a selection process which includes PM-10 emissions reduction potential. MAG will also be responsible for conducting the PM-10 Efficient Street Sweeper Test. The Governor of Arizona has designated MAG as the regional air quality planning agency and metropolitan planning organization for transportation in Maricopa County.

MAG will allocate CMAQ funds to purchase PM-10 certified street sweepers in FY 2001 through FY 2004. If the FY 2001-2005 TIP is approved as recommended, additional CMAQ funds will also be available for sweepers in FY 2005. The MAG PM-10 Efficient Street Sweeping Test is scheduled to be conducted by December 31, 2001. MAG has also allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the FY 1999 Unified Planning Work Program and Annual Budget.

The MAG Executive Director will ensure that the Regional Council is presented with a plan to allocate CMAQ funds to purchase PM-10 certified sweepers in each year the funds are available. This plan will include emission reduction assessment and ranking of project requests. The

Executive Director will also ensure that the MAG PM-10 Efficient Street Sweeper Test is conducted.

1998 ■ Arizona Department of Transportation indicates that this measure involves the potential use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweepers in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operation parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas where a significant source of emissions is vehicle reentrainment.

The Arizona Department of Transportation (ADOT) will review the results of the MAG PM-10 Efficient Street Sweeping Test. If ADOT determines that the scope of the test was broad enough to fully address the economical and technological feasibility of the PM-10 efficient street sweeping units, ADOT will review the feasibility of replacing older equipment, as it is retired, with the PM-10 efficient street sweeping units. Presently, ADOT owns three street sweepers and has three other street sweepers on contract.

If, following the development of certification standards and the completion and review of the MAG PM-10 Street Sweeping Test, the PM-10 street sweeping units are approved by ADOT Management as being economically and technologically feasible and are shown to be safe for use on State roadways, then ADOT would be the entity responsible for implementation. Legal authority for this action is provided under A.R.S. 28-332 Department jurisdiction.

The schedule for potential implementation of this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; the evaluation of the MAG PM-10 Efficient Street Sweeping Test by ADOT; and the evaluation of the safety issues, economics, and technology as it relates to the responsibilities ADOT has to the public for

maintaining all state owned transportation systems. Therefore, a preliminary timeline is provided.

By December 1999	Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.
By December 2001	MAG PM-10 Efficient Street Sweeping Test.
By December 2002	Determination of economic and technological feasibility and public safety issues by ADOT. If feasible for ADOT, begin to procure PM-10 efficient street sweepers to replace older equipment, as it is retired.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning work Program and Annual Budget. As a signatory on the Memorandum of Agreement, ADOT would, on a time available basis, participate as a member of the stakeholders committee. ADOT, through the Transportation Planning Group Senior Transportation/Air Quality Planner, with track the following two timeline for PM-10 efficient street sweeping:

By December 1999	ADOT will track the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAE, and the South Coast Air Quality Management District, and
By December 2001	ADOT will participate, on a time available basis, as a member of the MAG Street Sweeper Stakeholder Committee and the MAG street sweeper test.

If the test proves PM-10 street sweepers to be economically and technologically feasible and ADOT determines that the sweepers are efficient, operationally sound, and are feasible and safe for use on State roadways, then ADOT, through the Transportation Planning Group Senior Transportation/Air Quality Planner, would track the progress made with the implementation of this measure.

51. Research in Areas with High Particulate Emissions

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which appropriated $50,000 for the State General Fund to the Arizona Department of Environmental Quality for Fiscal Year 1998-1999 to conduct additional research to identify

sources and evaluate PM-10 control measures in areas with high particulate emissions. The research will include chemical mass balance analysis of filters in the targeted areas to provide additional information about particulate sources. The expenditure of general fund monies must be matched by an equal expenditure of monies from gifts, grants or donations or the general funds revert to the State general fund by the end of the fiscal year (Section 39 of S.B. 1427).

52. Restaurant Charbroiler Controls

1999 ■ Maricopa County, revised 1999 commitment, indicates that this measure involves developing a new rule to require existing chain-driven charbroilers, typically found in restaurants specializing in grilled meat products, to be equipped with emission control equipment. All new charbroilers would have to be similarly equipped prior to commencement of operations. Based on a preliminary survey, approximately 90 of the County's 9,000 restaurants would be affected. However, in the summer of 1999 the South Coast Air Quality Management District initiated a rule revision process to include under-fired charbroilers. This proposal will address additional facilities that emit more than the chain-driven charbroilers. Maricopa County will wait until the South Coast finalizes its revisions to complete the County's rule development process. This timing allows the County to implement a rule for a significantly larger number of facilities. This will have more pollution reduction benefit, and is more equitable approach.

The Maricopa County Board of Supervisors is authorized by A.R.S. 49-479 to adopt rules for air pollution control and by A.R.S. 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. 49-471, the executive head of the department designated under A.R.S. 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. 49-502, 49-511, 49-512 and 49-513.

A new rule will be developed for Board consideration under the following revised schedule:

July - October 2000	Research and draft new rule.
November - March 2001	Workshop proposed new rule.
March - May 2001	Board consideration of proposed rule.

The Maricopa County Environmental Services Department has 16 inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. The Department's annual revenue for the air quality program is approximately $3.85 million. Any incremental costs to the County will be covered by the permit program fee revenue.

These requirements would be administered through a permit program which includes review of the permit, inspection of facilities, source test of equipment and review of records and activities. The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. The Department will track the number of notices of violations, other enforcement options and the amount of penalties for rule violations.

53. PM-10 Episode Thresholds

1999 ■ Maricopa County, 1999, indicates that this measure involves the revision of the Maricopa County Residential Woodburning Restriction Ordinance to include an action level for declaring a restricted-burn period based on particulate levels. Under this program, high air pollution advisories are called whenever the Control Officer determines that meteorological conditions are conducive to an accumulation of carbon monoxide and/or particulates in exceedance of the standards or when air quality reaches other limits established by the Control Officer. The Control Officer currently bases the decision on carbon monoxide levels. However, the revised ordinance will provide triggers for basing decisions on particulates as well.

Maricopa County, through authority granted in A.R.S. 11-871, adopted a Residential Woodburning Restriction Ordinance in 1994. Pursuant to A.R.S. 11-871, the Board designated the Environmental Services Department to develop, implement and enforce an ordinance relating to residential wood burning restrictions. Pursuant to A.R.S. 11-871, the County is specifically authorized to issue warnings or a uniform civil ticket and complaint for violations of the ordinance.

The Department will revise the Residential Woodburning Restriction Ordinance for Board consideration. The revised ordinance will include ambient PM-10 concentration triggers for calling high air pollution advisories at approximately 110 to 120 ug/m_3. The ordinance will also include factors which influence the decision. Examples of factors include the range of ambient temperatures to ensure that conditions are cold enough that residential woodburning will occur and the timing or meteorological frontal systems moving into the area. The ordinance will be revised under the following schedule:

October - April 1999	Research and draft revised ordinance.
May - June 1999	Workshop proposed revisions.
July - August 1999	Board consideration of proposed revisions.

Existing staff and funding will be provided for this measure. The Department designates approximately $30,000 of its Federal 105 grant for the

woodburning program including both public information and enforcement. Additional resources will not be necessary to fulfill the commitment set forth.

Once a high air pollution advisory is called, Departmental staff on stand-by are notified and then survey neighborhoods for residences in which burning takes place. If identified, a resident is issued a warning for the first violation. Pursuant to A.R.S. 11-871, additional violations are subject to the imposition of a civil penalty of $50 for the second violation and $100 for a third or any subsequent violation. The Maricopa County Environmental Services Department compiles an annual report which includes the number of advisories and number of enforcement actions.

PART 2: EXISTING MEASURES WHICH ARE BEING STRENGTHENED

54. Remote Sensing

1998 ■ Arizona Legislature passed S.B. 1427 in 1998 which removes the mandate for the deployment of a minimum of six remote sensing van units on the road by ADEQ in the operation of the remote sensing program. The program applies to Area A and is required to include data quality assurance and data quality evaluation.

In addition, the legislation requires that when any vehicle manufactured after the 1996 Model Year and registered in Area A is identified as exceeding the emissions standards, a notification letter to the registered vehicle owner will be sent requiring an emissions test within thirty days. If the owner does not comply, the vehicle registration will be suspended. Once compliance is achieved, the vehicle owner may apply for reinstatement on payment of applicable fees (A.R.S. 49-542.01).

55. Expansion of Public Transportation Programs

1997 ■ City of Avondale will continue to seek ways to improve public transportation through short range transit improvements. During FY 1997-1998 the City has expanded the Public Transportation System to provide service to three new communities. Potential service changes may include increasing the level of service, expanding service to areas currently without service, and attracting additional ridership through marketing and promotion. The City will continue to work with RPTA to install bike racks on all buses and to install bike racks at Park-and-Ride locations.

If voters approve future sales tax earmarked for transportation these funds would be used for services such as expanded local bus service on weekends and holidays, incorporate Dial-a-Ride service, and new transit services such as limited-stop commuter service, neighborhood mini-bus service, and high

capacity rapid transit. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Chandler continues implementation of its program to improve bus stop facilities for passengers to include bus shelters and benches. Of 201 bus stops citywide, 81 stops currently have passenger amenities, i.e., shelters and benches. An additional 19 locations are planned for improvement in FY 1998.

The City has also completed the implementation of 76,000 annual miles of bus service on route #156; 11,000 miles on route #72; added 35,000 miles on route #136; and increased annual service to 44,000 miles on route #81. A new route, #108, will provide service to Chandler beginning August, 1997, adding an additional 6,100 miles.

In addition, the Mayor and Council have appointed a Task Force to develop a plan for additional transit in Chandler. The plan, adopted on April 27, 1997, calls for a grid bus system with 15 and 30 minute headways, expanded hours of service for bus and dial-a-ride and an expanded transit service area to cover the entire city. The plan also calls for planning for regional commuter/light rail at such time as it should expand to Chandler. A campaign committee from Chandler Chamber of Commerce is in the process of developing election strategies and will likely solicit Council to call for a half-cent sales tax election in 1998.

Improvements to the bus stop facilities will be completed in FY 1998. Increases in miles of service on bus routes is ongoing. If approved by the voters, the implementation of the transit plan is tentatively scheduled to be phased in over a five year period. Transit services are currently funded with approximately $650,000 annually. Two FTEs administer the program. If approved by the voters, half-cent sales tax generates approximately $8.7 million annually. An additional three FTE would be added over the first four years of the plan. Participation in the regional transit planning is allocated through the annual budget process.

1997 ■ City of El Mirage will work in conjunction with the Regional Planning Transportation Authority (RPTA) to improve the public transit system. The City will continue to seek to expand and/or improve its dial-a-ride services, such as additional routes and providing transit service information to users. In progress. The City will work with the RPTA to expand and improve its bus service when it is deemed prudent. One of our Council members is a member of the RPTA Board of Directors. Funding for new or improved dial-a-ride service are determined in the City's annual budget development process.

1997 ■ Town of Fountain Hills agrees to upgrade and expand on the existing transit service by implementing a van-shuttle/dial-a-ride program this year on a trial basis. The program begins on September 29, 1997, and is called the Fountain Hills Shuttle Service. This measure will be jointly implemented by the Town of Fountain Hills in collaboration with the Regional Public Transportation Authority ("RPTA"), Maricopa County, and the American Red Cross. Legal authority for this is provided under ARS Section 9-240- "General Powers of Council".

Regarding implementation this service begins on September 29, 1997, and offers the Town of Fountain Hills' residents the opportunity now to connect with the 106 and 94 bus routes at Mayo Clinic (Shea Blvd.) With five departure times from each location. This service is free. The Town of Fountain Hills has included $27,000 in the Town budget to cover payment for the Red Cross personnel used to drive the vans. This measure does not represent an ordinance, regulation, or rule requiring enforcement.

1997 ■ Town of Gilbert began providing public transit and dial-a-ride service during 1996. A local bus route in Mesa was extended through Gilbert, providing connections with several regional bus routes. This route provides 370 daily miles of service in Gilbert, amounting to 94,350 service miles annually, and is operated Monday through Friday, from approximately 5 a.m. until 7 p.m.

An express bus route was extended into downtown Gilbert, providing service for commuters to downtown Phoenix. The Gilbert portion of this route accounts for 30 daily and 7,650 annual service miles, and is operated Monday through Friday from approximately 5 a.m. until 6:30 p.m.

In addition, the Town of Gilbert began providing town-wide dial-a-ride service by joining the Mesa/Chandler Dial-a-Ride (now the Mesa/Chandler/Gilbert Dial-a-Ride). This service is also provided Monday through Friday from about 4 a.m. until 7 p.m.

The Gilbert Town Council approved funding in May 1996. The Town of Gilbert began providing express bus service in August 1996. The Town of Gilbert began providing dial-a-ride service in September 1996. The Town of Gilbert began providing local bus service in March 1997. Participation in regional and local transit planning is allocated through the annual budget process. The Gilbert Town Council dedicated $300,000 for the above described public transit measures during FY 1996-97.

1997 ■ City of Glendale will work in conjunction with the Regional Planning Transportation Authority (RPTA) to improve the public transit system. The City will continue to seek to expand and/or improve its bus and dial-a-ride

services, such as additional routes, providing transit service information to users and placing bicycle racks on transit buses. In progress. The City will work with the RPTA to expand and improve its bus service when it is deemed prudent. Glendale's Mayor is a member of the RPTA Board of Directors. Funding for new or improved bus and dial-a-ride service are determined in the City's annual budget development process.

1997 ■ City of Goodyear will work in conjunction with the Regional Planning Transportation Authority (RPTA) and neighboring cities to improve the public transit system. The City will seek to initiate a bus route and investigate the addition of a Dial-a-Ride service. In progress. The City will work with the RPTA to add a bus route when it is deemed prudent. Funding for a new bus service and a dial-a-ride program will be determined in the City's annual budget development process.

1997 ■ City of Mesa is participating in cooperative effort with the Federal Transit Administration (FTA), the Maricopa Association of Governments (MAG), the Regional Public Transit Authority (RPTA), and the cities of Tempe, Scottsdale, Phoenix, and Glendale to conduct feasibility studies to evaluate the need and general location for high capacity transit corridors throughout the metropolitan area. This effort will also include a series of Major Investment Studies which focus on subregions within the metropolitan area. Studies are also planned to evaluate the feasibility of high-capacity transit options such as light rail, busways, and commuter rail.

These studies are part of a continuing effort to evaluate transportation options. Related studies include the Arizona Passenger Rail Feasibility Continuation Study (1994), Downtown Phoenix Rail Trolley Feasibility Study (1995), Commuter Rail Demonstration Project Feasibility Study (1995), and Major Investment Studies for the Squaw Peak and Superstition Corridors - Phase I.

Bus service in Mesa will continue to expand; one express route has been added during the last year and during 1998, it is anticipated that Saturday service will be added to some sections of the system. The City will continue to explore additional funding sources to further expand the bus system. Evaluation of the feasibility of transit options is ongoing. Participation in regional transit planning is allocated through the annual budget process.

1997 ■ City of Peoria indicates that the City's existing Dial-a-Ride program was not approved for expansion FY 1997-1998. Uncertainties of future Federal, State, County, and local support can make service expansions financially difficult. Currently in operation. The current program funding is $613,220.

1997 ■ City of Phoenix will continue to seek ways to improve public transportation through short range transit improvements. Potential service changes may include increasing the level of service, expanding service to areas currently without service, and attracting additional ridership through marketing and promotion. The City will continue to work with RPTA to install bike racks on all buses and to install bike racks at Park-and-Ride locations.

In April 1997, the City Council approved recommendations of the Ad Hoc Transit Steering Committee to include a proposition on the September general election ballot asking voters to approve a half-cent sales tax which would be used to support expansion of public transportation in the City of Phoenix. This measure commits to the election, which will seek voter approval of funding to support services. If voters approve the tax, the funds may be used for services such as expanded local bus service hours, increased frequency of service on current high-demand routes, expanded service on weekends and holidays, expanded Dial-a-Ride service days and hours, and new transit services such as limited-stop commuter service, neighborhood mini-bus service, and high capacity rapid transit.

The City Council action to approve the item for the ballot was completed on April 29, 1997.
The City general election is scheduled for September 9, 1997.
The schedule for expanded transit and transportation service is contingent upon the results of the election.
Funding is allocated through the annual budget process. Additional funding will be available if voters approve the half-cent sales tax.

1997 ■ City of Scottsdale has extended Route 72 (Scottsdale Road) from Tempe north to Fashion Square during evenings and weekends, and has extended the former Scottsdale Connection Route 81 (Hayden Road) south to Ray Road in Chandler (Route 82) through an agreement with the RPTA.

The City of Scottsdale completed construction and opened the Loloma Transit Station, Scottsdale's downtown transit center in May 1997 to facilitate transferring between four major routes.

Two transit routes are scheduled for expansion in the next two years Route 94 will be expanded to provide transportation to "Scottsdale Town Center", a major shopping mall at the S.E. corner of Pima and Frank Lloyd Wright Blvd. Route 76 will provide transit service counter clockwise to this route.

The City will continue to seek ways to improve public transportation through short range transit improvements. Potential service changes may include increasing the level of service, expanding service to areas currently without service, and attracting additional ridership through marketing and promotion.

See attachments for details of the Transit Plan Guidelines which are part of the Circulation Element of the General Plan. The schedule for expanded transit and transportation service is contingent upon the results of the election. Funding is allocated through the biennial budget process. Additional funding will be available if voters approve the half-cent sales tax.

1997 ■ City of Tempe indicates that this measure focuses on expanding and enhancing existing public transit services. With the passage of the transit funding election. Tempe has expanded hours and days and improved the frequency on existing public transit routes. In the next four years, the City will continue to make improvements including the implementation of new routes, improved frequency, and expanded hours. Implementation is in progress over the next four years. Funding is provided through the dedicated sales tax for transit.

1997 ■ City of Tolleson Mayor and Council will adopt a resolution addressing the extension of public transportation programs in Tolleson contingent upon the City of Tolleson and the City of Phoenix entering into an Intergovernmental Agreement of the purpose of extending Bus Route 560 - from 67th Avenue and Van Buren to 91st Avenue and Van Buren. Three miles of bus service will be added to include Tolleson corporate limits. Mayor and Council will adopt this resolution. The City of Tolleson will commit General Fund and Lottery Fund monies upon extension of proposed Bus Route 560. Tolleson's estimated yearly share is approximately $20,000. Cost of $200 will be incurred for publication of said resolution.

1997 ■ Arizona Department of Transportation indicates that, as mandated by Arizona Revised Statutes (A.R.S.) 28-2611, ADOT will explore public transportation alternatives which could improve air quality and meet regional transportation needs in the metropolitan Phoenix area.
Previous ADOT implementation commitments for the MAG 1993 Carbon Monoxide Plan included facilitating the increased use of transit and ridesharing and support of the Capitol Rideshare Program in coordination with MAG/RPTA efforts. In support of these measures ADOT has participated in the Capitol Rideshare Program which includes the State's Travel Reduction Survey and Plans.

ADOT is one of six sponsors of the Clean Air Force which includes the voluntary "Don't Drive One in Five" campaign. The Regional Public Transportation Authority conducts the Clean Air Force program. Each state agency has appointed a year-round travel reduction coordinator. ADOT has one employee who administers the Travel Reduction Survey and monitors the rideshare programs.

ADOT staff initiates and serves as project managers for non-construction air quality Intergovernmental Agreements for Travel Reduction Programs. The programs, projects, and funding are identified each year as part of the MPO Overall Work Programs.

ADOT participated as part of the technical committee for the recently completed Rural Maricopa County Transit Development Plan. This study was initiated by the Maricopa County Department of Transportation in response to a variety of issues regarding transportation in the County. Phase I of the Maricopa County Rural Transportation Development Program identified several alternatives for the provision of general public transit in rural portions of the study area. It was determined that implementing public transit service along the Gila Bend corridor would be the first priority and this is the focus of Phase II of the study. If general public service can be successfully implemented in the Gila Bend/Buckeye area with regional service to Phoenix, this program can be expanded to other corridors and areas. The Wickenburg corridor was identified as a potential second priority. Federal rural transit funding would be applied for through ADOT for this service.

1997 ■ Regional Public Transportation Authority indicates that this measure involves improving public transportation by restructuring existing service or as additional funding may become available through the Regional Public Transportation Authority or its member jurisdictions budget processes. Short range transit improvements could include increasing the level of service, expanding service to areas currently without service and attracting additional ridership through marketing and promotion.

In September of 1996 the citizens of the City of Tempe approved a measure to provide a one-half of one percent sales tax increase for public transit. Tempe has already impacted the public transportation system by offering transit service in the City and specific destinations in bordering communities from approximately 5 a.m. to 10 p.m. Monday thru Saturday, and provides the regions only fixed route transit service operating on Sundays. Additionally, Tempe introduced the FLASHlite route, a local circulator which operates weekend service between downtown Tempe and the Phoenix Zoo.

In an effort to improve regional fixed route transit service, the RPTA and its member jurisdictions evaluate all regional routes on the basis of productivity and efficiency. As a result, non peak hour trips from RPTA funded routes 44, 72, 106, 520, and 570 were scaled back. The financial and capital resources that became available by these changes were used to add peak hour trips to the Red Line, extend route 90 to 67th Avenue, and combine routes 81 and 82 into a single regional route. Total revenue miles of transit service for the

region, including fixed route and dial-a-ride service is estimated to exceed 19 million miles in fiscal year 1997-1998.

Other service expansion improvements include the implementation of three new routes including the Northwest Valley Grand, 184 and 533. Transit service that was recently expanded exclusive of City of Tempe improvements include routes 136 and 531, additionally, the Mesa/Chandler Dial-a-Ride was expanded to include the Town of Gilbert.

Should additional funding become available, the Regional Public Transportation Authority and the City of Phoenix Public Transit Department would be responsible for implementation. A.R.S. Section 9-240 (Attachment A) "General Powers of Common Council".

Ongoing. The RPTA will work with its member jurisdictions to expand and/or improve its bus service on an as needed basis.

The level of personnel committed to transit operations in FY 1997-1998 is equivalent to 5.5 FTE. The RPTA is responsible for transit planning and program implementation. The projected RPTA operating budget for FY 1997-1998 is estimated at $17.9 million. Sources of operating revenue include federal and state grants, RPTA sales tax, farebox revenues, and other income sources including interest.

56. Employer Rideshare Program Incentives

1997 ■ City of Avondale has developed a comprehensive Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Transportation Coordinator has been designated for the City. Currently the City's TRP plan includes 70 percent to 90 percent bus subsidies, regional carpool, guaranteed emergency ride home service, new employee information, preferential parking locations, flexible work hours where feasible, and employee communication programs through posters, challenges, awards, and employee news letters. Components of the Trip Reduction Plan will be modified as needed. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Chandler has implemented a variety of rideshare incentives to increase employee participation in carpooling, including providing cash awards on a monthly basis and emergency rides for carpools participants. The City maintains an employee data base to match employees who desire to rideshare. The City has also increased the amount of preferential parking spaces for carpools, including covered parking. An annual trip reduction plan is submitted within 30 days of county approval of the annual plan submitted

after each year's compliance survey. Funding is allocated through the annual budget process.

1997 ■ Town of Gilbert has developed a Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Rideshare Coordinator has been designated for the Town. Currently, the Town's TRP includes alternate work schedules, bike racks and storage areas, reserved/preferential parking, subsidized gas/commute expense, guaranteed/emergency ride home, telecommuting options, employee communication programs through bulletin boards, TRP information for new hires, and employee newsletters. The TRP will be modified as needed. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale is a participant in the Maricopa County Travel Reduction Program as mandated by state law (A.R.S. Section 49-588). The City is required to submit a new plan to the County on an annual basis. The City's program currently consists of preferential parking spaces for carpool participants, subsidized bus passes to employees, gift/drawings, and encouragement of flexible work schedules. The City will seek ways in which to attain a higher level of employee participation and make modifications to its employee ridesharing program as needed. An employee committee was established in 1996 to evaluate the current employer rideshare program. The committee is in the process of identifying ways to improve participation in the program and will present those options to City Management, as appropriate. The City has a Transportation Coordinator who is responsible for implementing the City's Employee Travel Reduction Program. Funding will be determined through the City's annual budget development process.

1997 ■ City of Goodyear is intent on initiating a program that would consist of preferential parking spaces for carpools participants, gift/drawing for participants, and encourage flexible work schedules. When a bus route is established, subsidized bus passes to employees may be available. The City will seek ways in which to attain a higher level of employee participation and to promote the rideshare programs. The City will establish a employee committee to initiate a employee rideshare program. The committee will identify ways to promote participation in the program and will present options to the City Manager's Office, as appropriate. The City's rideshare committee will be responsible for promoting, designing, and implementing the City's employee rideshare program. Funding will be determined through the City's annual budget process.

1997 ■ City of Mesa has developed a comprehensive Trip Reduction Plan in compliance with the Maricopa County Travel Reduction Program. A

Rideshare Coordinator has been designated to coordinate carpool activities and employee education and incentive programs. A "Clean Air Club" has been organized that has developed a reward system for employees who take alternate modes of transportation to work. Since 1996 the City has provided 100 percent bus subsidies for any employee who rides the bus. The City Rideshare Coordinator uses electronic mail, employee newsletters, and notices in pay stubs to notify employees of air quality advisories and to promote rideshare and alternate transportation activities. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ Town of Paradise Valley participates in the Maricopa County Trip Reduction Program. Part of this program provides for employees to be compensated $1.33 a day for ride sharing. This incentive is offered to all employees of the Town and is paid for all alternative modes of transportation. There are also special incentives such as a monthly award drawings for people who use alternative modes of transportation. This program has been implemented by the Trip Reduction Coordinator. This measure is currently in place. Development and administration of the Trip Reduction Program Reduction Plan requires staff time equivalent to 0.20. A full-time exempt employee volunteers their services on off-hours, at a cost of zero. The annual budget for this measure is from the Town's General Fund.

1997 ■ The City of Peoria indicates that Peoria plans to make available several incentives in FY 1997-1998 to encourage City employees to rideshare and/or reduce their single occupancy vehicle trips to work. A major component of the incentive program is a public awareness campaign. In the fall, a transit fair will be held to educate employees about the various modes of transportation available to them. The transit fair will feature free food, prizes, and RPTA and other rideshare related booths.

The Transit Division will also promote the ridesharing program at the annual employee benefits fair in May of 1998.

The City of Peoria will provide the following incentives to employees who rideshare: 100 percent bus subsidy; preferential parking (covered at City Hall, Police Department, Court, and Library); Free Bicycle Program to employees who commit to commuting via bicycle; Guaranteed Ride Home Program for employees required to miss their rideshare home; additional bus shelters (10 new shelters added in FY 1996-1997 alone); and monthly drawings for prizes to employees who rideshare.

Staff in the Transit Division will be responsible for promoting this program. The Transit Division will earmark a total of $10,000 in FY 1997-1998 towards rideshare incentives.

1997 ■ City of Phoenix has developed a comprehensive Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Rideshare Coordinator has been designated for the City and for each City department. Currently the City's TRP plan includes 50 percent to 100 percent bus subsidies, employee emergency ride home service, new employee information, preferential parking locations and reduced parking fees for carpools and vanpools, telecommuting options, flexible work hours where feasible, and employee communication programs through posters, challenges, and employee newsletters. Components of the Trip Reduction Plan will be modified as needed.

The City will continue to implement a pilot program developed in 1996 to use electronic mail to notify employees of air quality advisories. Clean Air Tips are included in the electronic mail notifications. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale May 9, 1997 year 7 Trip Reduction Plans for the City's two primary campuses (Via Linda Campus and Civic Center Campus) comply with the Maricopa County Travel Reduction Program. A Transit Coordinator has been designated for the City to implement and maintain the program.

Clean Air and Bike to Work Challenges are offered each year. Various awards/incentives are given to participating employees. Employees are recognized for these rideshare efforts in the employee newsletter "Inside Scottsdale This Week".

The City of Scottsdale initiated the B.I.K.E.S. Program in 1997. It offers City employees a free bicycle in exchange for a commitment to ride the bike to work a certain number of times monthly for at least six months.

Various rideshare incentives include: 100 percent bus subsidies; Preferential parking for carpools and vanpools; Carpool and vanpool matching service database; Guaranteed emergency ride home service; Telecommuting options; Flexible work hours where feasible.

Electronic mail is used to notify employees of air quality advisories. Clean Air Tips are included in the electronic mail notifications.

Information about rideshare incentives are distributed to all new employees at orientation. Informational reminders are distributed through employee newsletters and posters. Components of the Trip Reduction Program will be modified as needed. Implementation is in progress. Funding is allocated through the biennial budget process. A full-time Transit Coordinator staffs this program.

1997 ■ City of Tempe indicates that this measure provides a variety of employer rideshare incentives as well as introducing strategies designed to reduce single occupant vehicle trips. The City has developed a comprehensive Travel Reduction Plan in compliance with the Maricopa County Travel Reduction Program. The City has a designated Rideshare Coordinator. The City's plan includes: weekly cash drawings for use of alternative modes and alternative work schedules; preferential parking for carpools; public awareness campaigns; alternative work hours, bike loan program, 100 percent subsidized bus fares, new employee information and guaranteed emergency ride home service. The City is creating and testing telecommuting as an option for applicable employees. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson indicates that this measure includes the adoption of a Resolution addressing rideshare programs and other incentive related programs for those employers with less than 50 employees at a worksite. Additionally, the City will embark on a public awareness campaign to further enhance the carpool and vanpool concept. Adoption of City of Tolleson Resolution by July 15, 1998 and commencement of campaign thereafter. Administration of plan will be coordinated by City Administrative and Planning Staff. Estimated cost for publication of Resolution and printing of brochures is $2,000.

1997 ■ Maricopa County indicates that this measure provides a variety of employer rideshare incentives as well as introducing strategies designed to reduce single occupant vehicle trips. Maricopa County is providing a 100 percent Bus Card Plus Program subsidy for employees.

Pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors), A.R.S. Section 49-588 and A.R.S. Section 49-474.01 the Board adopted Maricopa County Ordinance P-8 Reduction of Commuter Use of Motor Vehicles by County Employees in 1992. The ordinance provides the County Administrative Officer with the authority to approve and implement non-financial measures and to implement budgeted measures to reduce employee commute trips or the number of miles driven by county employees to and from work.

Maricopa County increased its subsidy of the Bus Card Plus Program for employees from 50 to 100 percent, effective June 26, 1996. On May 28, 1997, the subsidy was reauthorized for Fiscal Year 1998. Funding for the subsidy is estimated to cost approximately $280,000 which will be absorbed by Maricopa County Departmental budgets. The program is administered by the Human Resources Department.

1997 ■ Arizona Department of Transportation indicates that this measure provides a variety of strategies/incentives designed to reduce single occupant vehicle trips. Such strategies/incentives could include: preferential parking for carpools and vanpools, public awareness campaigns, Transportation Management Associations among employers, alternative work hours, vanpools for County and State employees, and vanpool purchase incentives. This will be an ongoing effort.

The 1993 Moderate Area Plan Commitments made by ADOT were to facilitate increased use of transit and ridesharing and to support the Capitol Rideshare Program in coordination with MAG/RPTA efforts. No additional funding or employees are required to implement the above programs. Associated costs are covered by the ADOT administrative budget.

To ensure that all employees are provided an opportunity to participate in rideshare programs, ADOT, through the Transportation Planning Group, will develop reporting procedures to identify participation levels in current programs and to identify possible opportunities for increased participation.

ADOT will continue to develop strategies and provide incentives to employees to increase the participation in existing and future rideshare programs. ADOT, through the Transportation Planning Group Air Quality Planner, will conduct a study to evaluate the effectiveness of existing strategies and incentives. This will provide possible opportunities for increased participation through elimination of existing barriers and also provide reasoned justification for those work areas that are not able to participate in the programs.

As baselines for the effectiveness of existing strategies and incentives are developed and reasoned justifications for non-participation are evaluated, opportunities for improvement will be identified to provide for enhanced or additional rideshare strategies/incentives. For the purposes of describing the Commitment the number of strategies and types of incentives would be the reporting unit.

1997 ■ Regional Public Transportation Authority indicates that this measure involves expanding the Regional Ridesharing Program to increase awareness of participation in alternate modes and work schedules. Efforts will be targeted at 1,250 employers with over 580,000 employees and students affected by the Maricopa County Trip Reduction Program (MCRTP) and the general public through the Regional Ridesharing Program. Since the last commitment, an additional 450 employers have been added to the TRP program. RPTA employee incentives include: free bus pass, alternate work hours, telecommuting, alternate mode subsidy, and guaranteed ride home.

The single occupant vehicle rate for RPTA employees has dropped from 42 percent to 36 percent since 1994.

The Regional Public Transportation Authority, as the regional transit agency for Maricopa County (A.R.S. 48-5101) provides these services to improve mobility and air quality.

The schedule for planned activities are as follows:

- Carpool, vanpool and bicycle matching services offered daily by phone and interactively on the internet home page
- Turn-key vanpool program available on an ongoing basis
- Fourteen Transportation Management Associations hold periodic meetings
- Area-wide awareness and promotion campaign with paid advertising conducted
- RPTA employee rideshare incentives ongoing
- Employer Transportation Fairs based on employer request
- RPTA's Internet web site offers information on the following rideshare topics: carpooling programs; Commuter Club promotions; Vanpooling programs; Training sessions available.

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000. Of this total, $394,000 is budgeted for the Rideshare Program through ISTEA funding.

57. Preferential Parking for Carpools and Vanpools

1997 ■ City of Avondale has developed a comprehensive Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Transportation Coordinator has been designated for the City. Currently the City's TRP plan includes 70 percent to 90 percent bus subsidies, regional carpool, guaranteed emergency ride home service, new employee information, preferential parking locations, flexible work hours where feasible, and employee communication programs through posters, challenges, awards, and employee newsletters. Components of the Trip Reduction Plan will be modified as needed. Funding is allocated though the annual budget process. Implementation is in progress.

1997 ■ City of Chandler increased the number of preferential permitted parking spaces for carpoolers including free/covered spaces adjacent to work locations. An annual trip reduction plan is submitted within 30 days of county

approval of the annual plan submitted after each year's compliance survey. Funding is allocated through the annual budget process.

1997 ■ Town of Gilbert has developed a Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Rideshare Coordinator has been designated for the Town. Currently, the Town's TRP includes alternate work schedules, bike racks and storage areas, reserved/preferential parking, subsidized gas/commute expense, guaranteed/emergency ride home, telecommuting options, and employee communication programs through bulletin boards, TRP information for new hires, and employee newsletters. The TRP will be modified as needed. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale indicates that preferential parking spaces for employees that carpool have been established at major City facilities. Additional preferential parking spaces will be established in existing and new facilities, where appropriate. An employee committee was established in 1996 to evaluate the current employer rideshare program. The committee is in the process of identifying ways to improve participation in the program and will present those options to City Management, as appropriate. The City's Transportation Coordinator is coordinating the City's efforts. Funding to implement this measure is determined in the City's annual budget development process.

1997 ■ City of Goodyear indicates that preferential parking spaces for employees that carpool have not yet been established at major City facilities. Additional preferential parking spaces will be established in existing and new facilities, where appropriate. The City will establish an employee committee to evaluate the possibilities of a preferred parking program. The committee will identify ways to improve participation in the program and will present those options to the City Manager's Office, as appropriate. The City's employee committee is coordinating the City's efforts. The City's employee committee will be responsible for promoting, designing, and implementing the City's employee carpools program. Funding will be determined through the City's annual budget process.

1997 ■ City of Mesa has developed a comprehensive Trip Reduction Plan in compliance with the Maricopa County Travel Reduction Program. A Rideshare Coordinator has been designated to coordinate carpool activities and employee education and incentive programs. A "Clean Air Club" has been organized that has developed a reward system for employees who take alternate modes of transportation to work. Since 1996, the City has provided 100 percent bus subsidies for any employee who rides the bus.

The City Rideshare Coordinator uses electronic mail, employee newsletters, and notices in pay stubs to notify employees of air quality advisories and to promote rideshare and alternate transportation activities. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ Town of Paradise Valley will provide a special parking space for car-poolers. The space will be closer to the building. This program will be implemented by the Trip Reduction Coordinator. This measure will be included in the annual Trip Reduction Program to be revised and submitted to the Maricopa County Trip Reduction Agency in November of 1997. Development and administration of the Trip Reduction Program Reduction Plan requires staff time equivalent to 0.20. A full-time exempt employee volunteers their services on off-hours, at a cost of zero. The annual budget for this measure is from the Town's General Fund.

1997 ■ City of Peoria has made available covered, preferential parking spaces at City Hall, Peoria Municipal Court, Peoria Library, and the Peoria Police Department at no charge for employees who carpool. The City of Peoria has also made available uncovered preferred parking spaces at the Municipal Operations Center and Peoria Community Center.

While the City of Peoria will continue to implement and enforce this measure for its own employees, this measure is not reasonably available throughout the community. As a suburban area, Peoria has only a few city-operated public parking facilities (downtown Peoria, Peoria Municipal Complex, Peoria Community Center, and parks). In the downtown, the city-operated parking is very limited and located on the street adjacent to the independent retail shops. As part of the City's revitalization efforts to improve the downtown business district, the businesses have opposed eliminating the street parking in favor of parking lots. It should also be noted that the employers located in the downtown area employ less than fifty (50) employees and are not subject to the mandatory Maricopa County travel Reduction Program.

The City of Peoria plans to continue offering preferential parking for employees who rideshare. Costs include maintaining painted stalls and the issuance of carpool permits. The cost of implementing this measure is minimal and will be absorbed by the Facilities Division of the Public Works Department.

1997 ■ City of Phoenix has developed a comprehensive Trip Reduction Plan (TRP) in compliance with the Maricopa County Travel Reduction Program. A Rideshare Coordinator has been designated for the City and for each City department. Currently the City's TRP plan includes 50 percent to 100 percent bus subsidies, employee parking fees in the downtown area,

regional carpool and vanpool matching service, guaranteed emergency ride home service, new employee information, preferential parking locations and reduced parking fees for carpools and vanpools, telecommuting options, flexible work hours where feasible, and employee communication programs through posters, challenges, and employee news letters. Components of the Trip reduction Plan will be modified as needed.

The City will continue to implement a pilot program developed in 1996 to use electronic mail to notify employees of air quality advisories. Clean Air Tips are included in the electronic mail notifications. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale May 9, 1997 year 7 Trip Reduction Plans for the City's two primary campuses (Via Linda Campus and Civic Center Campus) comply with the Maricopa County Travel Reduction Program. A Transit Coordinator has been designated for the City to implement and maintain the program.

Employees who carpool and/or vanpool are given preferential parking at both campuses. In addition, there is a matching service database for those who wish to carpool or vanpool. City vehicles are available for work related travel. A guaranteed emergency ride home program is available to all employees. All employees are eligible to receive free bus passes.

Information about carpool and vanpool options are distributed to all new employees at orientation. Informational reminders are distributed through employee newsletters. The City of Scottsdale is also active in the Greater Scottsdale Transportation Management Association, a public/private partnership which encourages rideshare activities. Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Tempe indicates that this measure provides a variety of employer rideshare incentives as well as introducing strategies designed to reduce single occupant vehicle trips. The City has developed a comprehensive Travel Reduction Plan in compliance with the Maricopa County Travel Reduction Program. The City has a designated Rideshare Coordinator. The City's plan includes: weekly cash drawings for use of alternative modes and alternative work schedules; preferential parking for carpools; public awareness campaigns; alternative work hours, bike loan program, 100 percent subsidized bus fares, new employee information and guaranteed emergency ride home service. The City is creating and testing telecommuting as an option for applicable employees. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson indicates that this measure involves the Adoption of a Resolution addressing rideshare program and other incentive related programs for those employers with less than 50 employees at a worksite. As mentioned under the employer rideshare program, the City of Tolleson will embark on a public awareness campaign to further enhance the carpool and vanpool concept. Adoption of City of Tolleson Resolution and Commencement of Campaign by July 15, 1998. Administration of plan will be coordinated by City Administrative and Planning Staff. Estimated cost for publication of Resolution and printing of publicity brochures is estimated at $2,000.

1997 ■ Maricopa County indicates that this measure encourages public and private employers to provide preferential parking spaces for carpools and vanpools to decrease this number of single occupant automobile work trips. Pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors), A.R.S. 49-588 and A.R.S. Section 49-474.01 the Board adopted Maricopa County Ordinance P-8 Reduction of Commuter Use of Motor Vehicles by County Employees in 1992. The ordinance provides the County Administrative Officer with the authority to approve and implement non-financial measures and to implement budgeted measures to reduce employee commute trips or the number of miles driven by county employees to and from work.

Maricopa County has relocated carpool preferential parking spaces closer to the building entrance. Moreover, the new parking plan also provides for open parking in place of reserved parking. This policy reduces the motivation for non-carpoolers to park in carpool spaces. The new parking plan was implemented for the Jefferson parking garage in April 1997. This is an ongoing program administered by the Protective Services Office covered by the existing budget.

1997 ■ Arizona Department of Transportation indicates that this measure encourages public and private employers to provide preferential parking spaces for carpools and vanpools to provide an incentive to decrease the number of single occupant automobile work trips. The preferential treatment could include covered parking spaces or close-in spaces. This will be an ongoing effort and additional spaces will be provided on an as needed basis.

ADOT provides preferential, close-in parking for employee carpools and vanpools, both covered and uncovered. The preferential parking program is governed by the Manager of the General Operations Group with input from the Executive Quality Council. Location and signing or reserved spaces remains with the Manager, General Operations Group. Parking lots will be managed and will reflect the number of rideshare, handicap, and customer parking spaces according to the changing needs of the Department.

Carpool vehicles are certified by the Capitol Rideshare Administration. Carpool parking holds preferential location parking and is open to carpool certified employees on a first-come-first-served basis.

Currently in the ADOT Headquarters Area, there are approximately 1800 parking spaces. In 1993, ADOT changed its parking policy to provide additional spaces for the Rideshare program on an as needed basis. Available spaces for Rideshare vehicles have been increased from 134 in 1993 to 354 in 1997. This includes spaces provided at other ADOT locations in the nonattainment area.

As preferential parking spaces for 30 year employees become available through employee retirement, they will be used for the Rideshare Program. No additional funding or employees are required to implement the parking programs. Associated costs are covered by the ADOT administrative budget.

Providing preferential parking spaces does not ensure participation. ADOT, through the Transportation Planning Group Air Quality Planner, will conduct a study to determine the effectiveness of the Program for air quality purposes. This study will provide information as to the number of actual participants in the program, i.e., the number of occupants per vehicle. This number becomes significant as the criteria is being developed for the use of HOV lanes for future freeways. The study should also provide information to forecast future preferential parking space requirements.

For describing the Commitment the number of preferential spaces for carpools and vanpools will be the reporting unit. This information will be provided to the Maricopa County Environmental Services Division for the required annual report for the Environmental Protection Agency.

1997 ■ Regional Public Transportation Authority indicates that a special RPTA employer workshop focuses on parking management and demonstrates methods by which employers can develop preferential parking systems. This is targeted primarily at employers with sites affected by the Maricopa County Trip Reduction Program. Approximately 1250 employers are planning to implement strategies with goals to reduce vehicle commuting trips.
Because of the difficulty in achieving the annual trip reduction target, many employers are looking to more enhanced methods of reducing vehicle trips. Mandatory fees for parking is one of the strongest incentives to rideshare (or disincentives to driving alone). Many employers are subsidizing alternative mode usage in their current parking management programs and Commuter Club and more are implementing fee based parking. Employees of the RPTA currently pay market rates for parking of $30 to $50 per month. RPTA participates as a voluntary TRP organization.

The Regional Public Transportation Authority, through a contract with the Maricopa County, and according to the Omnibus Air Quality Legislation provided under A.R.S. 49-581 through 49-593 (Attachment B), provides these services.

Collateral materials and "how to" manuals on various aspects of parking management are available throughout the year. Employer trainings on parking management given about every quarter.

58. Coordinate Traffic Signal Systems

1997 ■ Arizona Legislature passed H.B. 2237 in 1997 which contains an appropriation of $500,000 in each of fiscal years 1997-1998 and 1998-1999 from the State General Fund to the Arizona Department of Transportation for distribution to cities and counties for synchronization of traffic control signals within and across jurisdictional boundaries (Section 23 of H.B. 2237).

1997 ■ City of Chandler is currently coordinating traffic signal timings with the Cities of Tempe and Mesa. The City provides for progression of traffic along all north-south arterial streets crossing city boundaries from 56th Street to Alma School Road during peak travel periods. Signals are also timed for progression of traffic along Arizona Avenue, McQueen Road, and all east-west streets from Elliot Road to Chandler Boulevard within the City of Chandler. Reliability of signal coordination will be substantially improved by installation of intertie cabling along Ray Road from 56th Street to Dobson Road and along Alma School Road from Frye Road to Ocotillo Road. Installation of intertie cabling along all other arterials streets in the City of Chandler is programmed for completion by FY 2000.

In addition, Chandler's City Code requires installation of conduit for cabling to interconnect signals on all newly-constructed arterial streets. Implementation will be ongoing. Installation of intertie cabling along Ray Road from 56th Street to Dobson Road will be completed in June 1997 and along Alma School Road from Frye Road to Ocotillo Road by July 1997. Installation of intertie cabling along all other arterials streets in the City of Chandler is programmed for completion by FY 2000. One new position, traffic signal systems engineer, has been added in FY 1998 to monitor the operation of arterial streets and to optimize signal timing for minimum delays and progression efficiency. Funding is allocated through the annual budget process.

1997 ■ Town of Gilbert is purchasing equipment capable of time-based coordination. The Town is also completing a signal system feasibility study to recommend a centralized control system. Implementation is in progress. By August the following corridors should have peak hour progression established: Val Vista

Drive (Elliot Road to Baseline Road), Cooper Road (Warner Road to Baseline Road), McQueen Road (Elliot Road to Baseline Road). Other corridors will follow as equipment is acquired and updated. Funding is allocated through the annual budget process.

1997 ■ City of Glendale currently has a coordinated time-based traffic signal system. The City will install signal interconnect conduit and fiber optic cable that will serve as the communications link to improve the City's existing traffic signal system. These improvements will help enable the City to develop intelligent transportation systems in the future.

The project is anticipated to occur in three phases. The initial installation of the conduit system will occur at 59th Avenue, between Camelback Road and Glendale Avenue (it will be part of the 59th Avenue street improvement project which began in March 1997). The second phase will be on 59th Avenue, from Glendale Avenue to Bell Road. The third phase of the conduit installation will be on 59th Avenue from Bell Road to the Loop 101 Freeway. Phases two and three are currently in the design phase. The City's Transportation Department is responsible for the implementation of this measure. Funding to implement this measure is determined in the City's annual budget development process.

1997 ■ City of Goodyear is currently in the process of establishing coordinated time-based traffic signal system. The City will install signal interconnect conduit and fiber optic cable that will serve as the communications link to improve the City's existing traffic signal system. These improvements will help enable the City to develop intelligent transportation systems in the future. The project is expected to take 2-3 years to complete. The traffic signals located on Litchfield Road between MC 85 and Indian School Road will be on the system. This portion of the project is close to being completed. The fiber optic cable and interconnect conduit will be installed when feasible. The City's Public Works Department is responsible for the implementation of this measure. Funding to implement this measure is determined in the City's annual budget process.

1997 ■ City of Mesa currently maintains a computerized traffic signal system that provides coordination of traffic signals for improved traffic flow. In fiscal year 1996-1997 approximately $250,000 was spent for system upgrades. The City will continue to work with MAG to coordinate a regional traffic synchronization program. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of Peoria indicates that Peoria has received a Federal Grant, administered by the Arizona Department of Transportation for conducting a

study of various methodologies and systems available to coordinate the timing and operation of the City's traffic signals. The studies will recommend a specific system and an implementation strategy. Upon completion of the study, the City will commence actual construction. Currently the City has received a grant totaling $800,000 and has $170,000 available from the sale of General Obligation Bonds.

1997 ■ City of Phoenix currently maintains a computerized traffic signal system that provides coordination of traffic signals for improved traffic flow. Approximately 98 percent of the City's 835 signals are synchronized through this computer control and a time-based system. Only a few signals in developing areas with low traffic volumes are not synchronized.

Over the next few years Phoenix will be implementing a new computerized signal system that will centralized the operation of the City's signals into an Advanced Traffic Management System (ATMS). The ATMS will include new communication links, traffic signal controller equipment, system detection, video cameras for downtown traffic management, as well as connectivity to the ADOT Freeway Management System and other municipalities. The improved data collection, real-time graphical displays, and video will allow for the City to more closely monitor and more effectively adjust signal timing for improved traffic flow.

Implementation is in progress. The connection of existing traffic signals to the ATMS is expected to be completed by the year 2000. The ATMS has been designed to allow expansion to accommodate the connection up to 2000 traffic signals. $6.3 million dollars has been allocated for the implementation of the ATMS.

1997 ■ City of Scottsdale traffic signal system is computerized. It provides coordination of traffic signals for improved traffic flow. The computerized system can be programmed to accommodate special events and traffic incidents. Approximately 98 percent of the City's traffic signals are synchronized through this computer control and a time-based system. Only a few signals in developing areas with low traffic volumes are not synchronized.

The City will work with the Arizona Department of Transportation (ADOT) and neighboring cities to coordinate the synchronization of City of Scottsdale traffic signals. Synchronization will be achieved by sharing traffic information through communication links.

Three program objectives for the City of Scottsdale Transportation Department, Traffic Engineering Division, which are reported in the Biennial Budget for fiscal years 1997-1999 are: Install preliminary phase of

comprehensive traffic detection system by June 1998; Install preliminary phase of Traveler Information system by December 1997; and Improve operation and accident analysis through video and computer technology enhancement.

The City of Scottsdale has negotiated a long-term agreement with U.S. West for leased telephone lines to communicate with the City's traffic signals. Implementation is in progress. The connection of existing traffic signals to the ATMS is expected to be completed by the year 2000. The ATMS has been designed to allow expansion to accommodate the connection up to 2000 traffic signals. Funding is allocated through the biennial budget process.

1997 ■ City of Tempe indicates that this measure implements and enhances synchronization and has been implemented by most of the larger municipalities in the area. The City currently maintains a computerized traffic signal system that provides coordination of traffic signals for improved traffic flow. Efforts are underway for large-scale coordination across the entire MAG region. The City would continue to work on this effort and Model Deployment as described in Measure 97-TC-2. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson Mayor and Council will adopt a resolution to this measure provided the following conditions are met. The City of Tolleson, in coordination with the Department of Transportation and Maricopa County commits to synchronize the five traffic signal systems currently within the City of Tolleson's jurisdiction, if and when traffic volumes reach state mandated 15,000 trips per day, per intersection. Because increases in traffic volume are unpredictable and average daily traffic is well under the above-mentioned state mandated guidelines, setting an implementation date would be premature at this time. Highway User Funds. Allocation of personnel is the responsibility of the Maricopa County Highway Department.

1997 ■ Arizona Department of Transportation indicates that this measure implements and enhances synchronized traffic signal systems to promote steady traffic flow at moderate speeds. Signal synchronization has been implemented by most of the larger municipalities in the area, and efforts are underway for large-scale coordination across the entire MAG region. This will be an ongoing effort.

ADOT, as mandated by A.R.S. 9-500.04, will pursue synchronization of traffic signals on State Highways in the nonattainment area in cooperation with local municipalities. Typically on urban portions of State Highways, local governments handle traffic control through agreements with ADOT.

A.R.S. 28-642 states, "On a State highway which has a traffic flow exceeding 15,000 motor vehicles per day in a nonattainment area, the director, in cooperation with local authorities, shall synchronize traffic control signals."

Included as part of the approved 1997 air quality House Bill 2237, monies will be appropriated from the General Fund to ADOT in the sum of $500,000 in each of the fiscal years 1997-1998 and 1998-1999 for distribution to cities and counties in Area A and Area B as defined in A.R.S. 49-541, for the mandatory synchronization of traffic control signals within and across jurisdictional boundaries.

An ongoing ADOT process is to synchronize, where warranted, traffic signals on the Controlled Access Freeways. Traffic signals on all state routes that pass through the City of Phoenix, including Grand Avenue, and the City of Tempe are synchronized. This measure is also a work element of the ongoing Intelligent Transportation System Program. (Refer to BACM #97-TC-3).
As part of a clean-air package signed into law by the Governor on April 29, 1997, House Bill 2237 appropriates the sum of $500,000 in each of the fiscal years 1997-1998 and 1998-1999 from the general fund to ADOT for distribution to cities and counties for synchronization of traffic control signals within and across jurisdictional boundaries.

59. Reduce Traffic Congestion at Major Intersections

1997 ■ City of Avondale indicates that the City will continue to implement intersection improvements to reduce traffic congestion at major intersections. Intersections are improved through the five-year Capital Improvement Program/Major Street Program, which supports widening of arterial streets. Intersection improvements are included in these projects and new development. The above program improves intersections by adding left turn lanes, thru lanes, and/or right turn lanes. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Cave Creek indicates that the Town has one major intersection. This intersection is signalized with turn lanes and median dividers. The Town is in the process of conducting a five year transportation plan, and will be in a position to respond to traffic needs as they arise.

1997 ■ City of Chandler is installing three to five traffic signals per year. The City continues to construct curbed medians on all new arterial streets, and control access for new development (provision of deceleration lanes, location of median openings, and location of driveways relative to public street intersections) is guided by policies documented in Technical Design Manual

Number 4. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ Town of Gilbert continues to make improvements to reduce traffic congestion at major intersections. This is being done through improved signal timing and street widening. Implementation is in progress. Funding allocated through the annual budget process.

1997 ■ City of Glendale will use a variety of traffic control strategies and devices, such as traffic signals, turn lanes and median dividers to facilitate traffic flow on substandard or excessively congested intersection. In progress. Traffic control strategies and devices are determined on a case-by-case basis as the need arises. Traffic control decisions are made by the City Traffic engineer. Funding to implement this measure is determined in the City's annual budget development process.

1997 ■ City of Goodyear will use a variety of traffic control strategies and devices, such as traffic signals, turn lanes and median dividers to facilitate traffic flow on substandard or excessively congested intersections. A timing study is in progress to synchronize the traffic signals along the City's major corridor. The timing plan will have a lag-left system which will be activated when the timing study is completed. In progress. Traffic control strategies and devices are determined on a case-by-case basis as the need arises. Traffic control decisions are made by the Public Works Department. Funding to implement this measure is determined through the City's annual budget process.

1997 ■ City of Mesa indicates that signalized intersections are evaluated periodically to determine if various control strategies can be implemented to reduce overall delay and improve traffic flow. The Traffic Signal Control System software reduces side street delays during off-peak hours. A combination of leading and lagging left turn signal operations are used to improve progression at major intersections. Bus pullouts are installed as adjacent property on existing bus routes is developed to reduce congestion on the streets. Intersection improvements such as adding turn lanes, lengthening turn lanes, and adding through lanes are continuously evaluated and added to the five year capital budget plan as appropriate.

Traffic patterns associated with special events are continuously evaluated and appropriate temporary congestion remediation measures are implemented such as dedicated through lanes, dedicated event access lanes and manual traffic flow assistance. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ City of Peoria requires the intersections to be widened as development occurs adjacent to the intersection. The City also budgets funding to conduct warranted studies, design, and construct signals at three intersections per year. Three intersections are signalized each year. Intersections are widened as adjacent development occurs. The City budgets funding to signalize three intersections per year.

1997 ■ City of Phoenix will continue to implement intersection improvements to reduce traffic congestion at major intersections. Most intersections are improved through the five year Capital Improvement Program/Major Street Program which supports widening of arterial streets. Intersection improvements are included in these projects.

The City of Phoenix Bottleneck Removal (BN) Program improves intersections by adding left turn lanes, thru lanes, and/or right turn lanes. Additional intersection improvements and traffic management programs will be implemented if voters approve the proposed half-cent sales tax in 1997. Implementation is in progress.

Funding is allocated through the annual budget process. Additional funding for intersection improvements and traffic management programs will be available through the Arizona Highway User Revenue Fund for the Capital Improvement Program.

1997 ■ City of Scottsdale will continue to implement intersection improvements to reduce traffic congestion at major intersections. One of the goals of the City of Scottsdale Transportation Department, Traffic Engineering Division, as stated in the Biennial Budget for FY 1997-1999, is to maintain 70 percent or more of the 36 major intersections in Scottsdale at levels of service (LOS) or better. Intersection improvement budget for 1996-1997 was $300,000. Actual expenditure was $400,000. The forecast for 1997-1998 is $1,250,000 and for 1998-1999 is $1,250,000 (Reported in the Biennial Budget for FY 1997-1999).

The City of Scottsdale Botteneck Removal (BN) Program improves intersections by adding left turn lanes, thru lanes, and/or right turn lanes. Additional intersection improvements and traffic management programs could be implemented if voters approve the proposed half-cent sales tax in 1997.

Implementation in progress. Funding is allocated through the biennial budget process. Additional funding for intersection improvements and traffic management programs will be available if voters approve the one-half cent

sales tax in 1997. Annual funding may also be available through the Arizona Highway User Revenue Fund for the Capital Improvement Program.

1997 ■ City of Surprise indicates that this measure involves widening Dysart Road (Road of Regional Significance) from Greenway Road to Bell Road and adding a traffic signal at the Greenway Road/Dysart Road intersection. Other roadway widening and intersection improvement projects will be completed, by either the City or the adjacent developer(s), as problems are identified and as funding becomes available. The Dysart Road widening and the Greenway Road/Dysart Road intersection improvements will be constructed in two phases. The schedule for completing this work is as follows: PHASE I Greenway Road to Grand Avenue; May 1997, complete design; June 1997, advertise bid for construction service; June 1997, initiate construction; September 1997, complete construction. PHASE II: Grand Avenue to Bell Road, fiscal year 1998, complete design; fiscal year 1998, advertise bid for construction services; fiscal year 1998-1999, initiate construction; fiscal year 1998-1999, complete construction.

Administration of Phase I improvements for this project will require staff time equivalent to .25 full-time employee, at an approximate cost of $12,000. This will be accomplished by current department personnel under the adopted City budget for FYs 1997 and 1998. The estimated cost for design and construction of Phase I is $187,000 which has been budgeted. Phase II design and construction is contingent upon grants and City funds becoming available.

1997 ■ City of Tempe indicates that this measure implements a wide range of traffic control techniques designed to facilitate smooth, safe travel through intersections. These techniques include stabilization, turn lanes or median dividers. The City would continue to evaluate and implement these traffic control techniques as needed at various intersections throughout the City. In addition, the transit plan calls for implementation of bus pull-outs at major intersections where feasible.

Implementation is in progress. Funding is provided through the annual budget process. Bus pull-outs are funded through private development during the development review process, and through the transit sales tax.

1997 ■ City of Tolleson will continue to monitor traffic flows and street congestion and make improvements on an as-needed basis. Maricopa County currently reports traffic flow and street congestion findings to the City of Tolleson. A set schedule will be made available should data reveal necessary improvements. City of Tolleson Improvement District Funds. Maricopa County Highway Department funds will finance improvements to those streets that fall under County maintenance jurisdiction. Personnel allocations depend on the jurisdiction of the streets in question.

1997 ■ Town of Wickenburg indicates that the Town has but one "major" intersection (U.S. Highway 60 where it intersects with U.S. Highway 93), which is governed by a traffic signal under the control and operation of the Arizona Department of Transportation (ADOT). An ongoing effort in coordination with ADOT is being made to reduce stopping and idling time and to move the traffic. The implementation schedule will depend on engineering studies by ADOT and any corrective measures that ADOT may make.

No funding will be required, as the Town of Wickenburg does not pay the cost of maintenance, operation and timing of the traffic light, but it does pay for the electricity used in its operation. The Town will continue, and is continuing, to fund the electrical costs.

1997 ■ Arizona Department of Transportation indicates that this measure would implement a wide range of traffic control techniques designed to facilitate smooth, safe travel through intersections. These techniques include signalization, turn lanes, or median dividers. This will be an ongoing effort.

The ADOT Commitment for the Moderate Area Plan was to implement intersection improvements such as adding turn lanes, lengthening turn lanes, widening streets, eliminating bottlenecks and jogs, and eliminating unnecessary traffic signals.

Pursuant to A.R.S. 28-104, ADOT is responsible for the planning, construction, and management of facilities on the State Highway System. The ADOT Five-Year Transportation Construction Program includes projects directed at intersection improvements. These projects facilitate turning movements, thereby helping to maximize intersection capacities. ADOT rarely removes traffic signals.

Intersection improvement projects are an ongoing ADOT construction activity and are included in the Five -Year Construction Program, when applicable. Intersection improvements can be included in the reconstruction of a roadway. Funding is then shown as an item in the Five-Year Highway Construction Program, when applicable.

Freeway Management Systems (FMS) as part of the Intelligent Transportation Systems (ITS) use cameras, road sensors, and variable message signs to collect and distribute traffic information. A total of 17 phases covering 240 miles of freeway is envisioned for the Phoenix area. Refer also to the measure, Develop Intelligent Transportation Systems.

Software is being developed to give drivers access to updated traffic conditions on freeways and surface streets in Arizona. The ADOT internet

site (www.azfms.com) and a network of kiosks will provide access to "real-time" information on road conditions.

The first two stages of the software development for the Phoenix Traffic Operations Center are complete. Additional enhancements have been identified and are included in future software stages.

A recent study was conducted to develop a traffic Interchange Improvement Prioritization Process to assist ADOT in establishing a systematic interchange improvement program. A final report was prepared by JHK & Associates in January 1997.

Several steps were required to complete the study including ranking and prioritizing potential construction locations. Nineteen interchanges were identified as potential project locations for complete reconstruction. Of these, ten are in the Phoenix metropolitan area. These potential projects include what improvements would be required to improve traffic flow and safety at each interchange.

For describing the Commitment, ADOT, through the Transportation Planning Group Air Quality Planner, will review progress on the traffic interchange improvement recommendations for potential reconstruction. ADOT will also review progress data on traffic interchange projects in the nonattainment area when shown as part of the Five-Year Highway Construction Program. This information will be provided to the Maricopa County Environmental Services Divisions for the required annual report for the Environmental Protection Agency.

60. Site-Specific Transportation Control Measures

1997 ■ City of Avondale indicates that the Street Department works with the Police Department to implement Special Event Traffic Control Plans for events involving large volumes of traffic. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Cave Creek indicates that the Town has one major intersection in its jurisdiction. This intersection will be evaluated for reprogramming to lag rather than lead. The Town is in the process of conducting a five year transportation plan, and will be in a position to respond to traffic needs as they arise.

1997 ■ City of Chandler indicates that two intersections are programmed for major reconstruction to provide dual left turn lanes. We will be identifying and prioritizing potential spot improvements for other major intersections

throughout the City with consultant assistance during the transportation plan update programmed for FY 1998. The first intersection at Alma School Road and Elliot Road is programmed for construction in FY 1999. Construction at the second intersection is tentatively programmed for FY 2001, depending upon availability of funding. Funding is allocated through the annual budget process.

1997 ■ Town of Gilbert hired a traffic engineer during calendar year 1996. His responsibilities include obtaining traffic counts to determine the number of vehicles at intersections throughout the day and making changes to traffic control signals to ensure that vehicle delays do not occur. The data that is obtained will determine where improvements (traffic signalization) will need to be made. Prior to the hiring of the traffic engineer, the Town hired a consultant to conduct traffic counts.

The Town has installed traffic controllers at four (4) intersections: Gilbert and Elliot, Lindsay and Elliot, Val Vista and Elliot, and Val Vista and Juniper. In addition, the Town created the position of traffic signalization technician, and hired two employees in July 1996. One of their main responsibilities is to provide operation and maintenance to all traffic signals. The Town will continue to monitor conditions and plan for needed improvements. Implementation is now in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale will use a variety of traffic control strategies and devices to facilitate traffic flow on currently substandard or excessively congested intersections. The City will evaluate site-specific transportation control measures on a case-by-case basis, taking into consideration traffic volume capacities and safety. In progress. For example, the City is currently providing signal protected U-turns (in conjunction with bus bays) where medians limit vehicular access to businesses, thus reducing vehicle miles traveled. Decisions on site-specific transportation control measures are made by the City Traffic Engineer. Funding for the implementation of this measure are determined in the City's annual budget development process.

1997 ■ City of Goodyear will use a variety of traffic control strategies and devices to facilitate traffic flow on currently substandard or excessively congested intersections. The City will evaluate site-specific transportation control measures on a case-by-case basis, taking into consideration traffic volume capacities and safety. In progress. For example, the City is currently providing signal protected U-turns (in conjunction with bus bays) where medians limit vehicular access to businesses, thus reducing vehicle miles traveled. The City is considering reducing the amount of curb cuts to promote through traffic and is exploring traffic signals at major access points. Decisions on site-specific transportation control measures are made by the

Public Works Department. Funding for the implementation of this measure are determined in the City's annual budget process.

1997 ■ City of Mesa indicates that signalized intersections are evaluated periodically to determine if varius control strategies can be implemented to reduce overall delay and improve traffic flow. The Traffic Signal Control System software reduces side street delays during off-peak hours. A combination of leading and lagging left furn signal operations are used to improve progression at major intersections. Bus pullouts are installed as adjacent property on existing bus routes is developed to reduce congestion on the streets. Intersection improvements such as adding turn lanes, lengthening turn lanes, and adding through lanes are continuously evaluated and added to the five capital budget plan as appropriate.

Traffic patterns associated with special events are continuously evaluated and appropriate temporary congestion remediation measures are implemented such as dedicated through lanes, dedicated event access lanes and manual traffic flow assistance. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ City of Peoria attempts to budget funding to study and modify two to three existing traffic signals per year of installing separate protected/permissive left turn movements. Two to three intersections studied each year for installation of left turn movements. The City attempts to budget $50,000 each year.

1997 ■ City of Phoenix Street Transportation Department works with the Police Department to implement Special Event Traffic Control Plans for events involving large volumes of traffic. The existing traffic control plan for the America West Arena will be revised as needed to incorporate the newer venues in the downtown area (Bank One Ballpark, theaters, museums, retail shops etc.).

The City will hire a consultant to conduct traffic/parking information feasibility study for downtown Phoenix. The study will evaluate the feasibility of an automated system to provide traffic conditions and parking information to the traveling public as they approach the downtown area. The concept to be evaluated would include a system of radio-controlled electronic message boards to direct traffic away from congestion and to open parking sites. As currently envisioned, the system would primarily be used on days when multiple events are scheduled in the downtown area.

The Aviation Department implements transportation control measure at Sky Harbor International Airport. Traffic flow patterns have been designed to

reduce congestion and vehicle idling. Regional shuttle bus services reduce single occupancy vehicle traffic. Off-site employee parking airport shuttle buses reduce congestion near the terminals. Implementation is in progress. Funding is allocated through the annual budget process Traffic/parking feasibility study (estimated $150,000).

1997 ■ City of Scottsdale evaluated traffic patterns before and during Super Bowl XXX, and programmed the signal computer to alleviate and avoid traffic predicaments. The City of Scottsdale completed construction of two bridges associated with the Greenway/Hayden CAP crossing prior to the 1997 Phoenix Open to alleviate traffic congestion. The Phoenix Open is an annual event. The City of Scottsdale Transportation Department's objective for 1997-1999 is to implement a traffic management program. The City works with the Chamber of Commerce, public and private sector stakeholders to evaluate options of managing parking and traffic associated with activity centers and special events throughout Scottsdale.

Mass Transit Alternatives (Measure 97-TC-1) and Expansion of Public Transportation Programs (Measure 97-TC-5) may result in increased funding for transit and ultimately help provide transit options for travel to activity centers. Without expansion of the current public transportation system, options of encouraging alternative transportation will be limited. Also see Measure 97-TC-10: Site Specific Transportation Control Measures. The Street Transportation Department works with the Police Department.

The Aviation Department implements transportation control measures at Scottsdale Airport. Traffic flow patterns have been designed to reduce congestion and vehicle idling. Regional shuttle bus services reduce single occupancy vehicle traffic. Off-site employee parking airport shuttle buses reduce congestion near the terminals.

Implementation is in progress. Funding is allocated through the biennial budget process. Traffic/parking feasibility study (estimated $150,000).

1997 ■ City of Tempe indicates that this measure encourages the implementation of any available transportation control measures targeting specific locations or subareas. This could include geometric or traffic control improvements at specific congestion intersection or at other substandard locations.

In April 1995, the City Council approved a plan to create a downtown parking management system as recommended by the Downtown Tempe Community Inc. (DTC), a management association of the downtown. Upon further study and testing, the DTC recommended that the parking management system include: the installation of multi-space meters on City controlled parking lots and on-street parking spaces; and the installation of wayfinder system, which

would help people locate available parking areas. In February 1997, this system was implemented in Downtown Tempe.

As part of the development review process, the City reviews site plans and recommends traffic control measures to improve traffic flow as well as measures to encourage the use of alternative modes. Alternative mode measures include pedestrian amenities, bicycle parking and transit stops. The City will continue to implement and encourage transportation control improvements as opportunities occur. Implementation in progress. Funding is provided through the annual budget process and through private development during the development review process.

1997 ■ City of Tolleson indicated this measure involves the installation of left turn signals at three City of Tolleson traffic signals when traffic counts warrant installation. Current Average Daily Traffic counts are too low for change in traffic patterns. Not being able to predict high average daily traffic, the City of Tolleson will commit to conduct traffic count studies periodically to determine the need for left turn signal installation. Public Works Department will be responsible for the administration and implementation of the left turn signal lights. The conversion of three traffic signal systems is estimated to cost $75,000 from approved City Highway User Funds (HURF).

1997 ■ Arizona Department of Transportation indicates that the 1993 Moderate Area Plan Commitment by ADOT was to implement intersection improvements such as adding turn lanes, lengthening turn lanes, widening streets, eliminating bottlenecks and jogs, and eliminating unnecessary traffic signals. This Commitment is addressed here and will also be addressed in the 1998 MAG Serious Area Carbon Monoxide Plans BACM #97-TC-9. This will be an ongoing effort.

Roadway and intersection improvement projects are an ongoing ADOT construction activity and are included in the attached Five-Year Highway Construction Program. These projects can include widening of roadways and adding turn lanes. Intersection improvements can be included in the reconstruction of a roadway. Funding for each year is shown as an item in the Five-Year Highway Construction Program.

As the proposed Freeway Management System and Intelligent Transportation System projects are developed and implemented, site-specific intersection improvements could be shown or identified. As part of the recently completed Traffic Interchange Improvement Prioritization Process Study, a total of 17 potential intermediate and 183 potential minor improvement projects were identified statewide. Nine of the potential intermediate projects that were identified are in the Phoenix metropolitan

area. Forty-six of the potential minor projects are located in the Phoenix metropolitan area and Maricopa County.

For the purposes of describing the Commitment, ADOT, through the Transportation Planning Group Air Quality Planner, will review progress data on site-specific improvement projects and provide the Maricopa County Environmental Services Division the information needed for the required annual report for the Environmental Protection Agency. As requested, this data will include reporting units from BACM #97-TC-8 and BACM #97-TC-9.

1997 ■ Regional Public Transportation Authority indicates that the RPTA facilitates Transportation Management Associations in the region. There are fourteen TMAs currently active representing 210 employers. Two of the fourteen TMA's are formal dues paying organizations. RPTA staff supports the other twelve informal TMA's groups. The employers in these associations work together to promote alternate mode use by coordinating transportation fairs, sponsoring educational workshops, networking and sharing ideas and jointly implementing programs or incentives that motivate employees i.e., guaranteed ride home programs, carpool matching or vanpool promotions, etc.

The Regional Public Transportation Authority as the regional transit agency for Maricopa County (A.R.S. 48-5101) provides these services to improve mobility and air quality. The TMAs meet monthly or bi-monthly. In 1997, mini-trainings will be scheduled at these meetings on the following topics:

- Motivation through Recognition
- New TRP Flexibility Options
- Air Pollution 101
- Bus Card Plus
- Carpools/Vanpools

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000. RPTA supports the two formal TMAs by contracting with them for $10,000 per year to provide rideshare and trip reduction support services on its behalf.

61. Encouragement of Bicycle Travel

1997 ■ City of Avondale encourages bicycle travel through establishing bike lanes with new road development. The Avondale Bikeway System includes bike lanes, bikeable streets, multi-use paths and to facilitate bicycle travel in the

Phoenix area. The City continues to install and maintain bike facilities at City parks, bus terminals, and Park and Ride lots. The City has adopted street cross section standards which provide on-street bike lanes on almost all new arterial and collector streets. Implementation is in progress. Additional bikeways are scheduled for the 1997-1998 fiscal year. The City has designated a Planner. Developers pay as development occurs.

1997 ■ Town of Carefree is a semi-rural community with a population of approximately 2300 residents located on the north edge of the Phoenix metropolitan area. Approximately 96 percent or 48 miles of its 50 miles of streets are paved. The Town of Carefree has an ongoing maintenance program of mowing and trimming the shoulders of streets to provide for full usage of street surfaces for vehicles, bicycles, and pedestrians. The Town of Carefree will continue to encourage bicycle and pedestrian travel and public awareness through its newsletter.
This measure will be implemented by the Town of Carefree. Legal authority for this action is provided under Section 9-240-3(c) of the Arizona Revised Statutes. The maintenance of the streets and shoulders is continuous. The encouragement of bicycle and pedestrian travel and public awareness announcements will be periodical. The shoulder maintenance will be inspected periodically by the Street Superintendent who will provide reports to the Town Administrator.

The annual cost of mowing and trimming the street shoulders is approximately $15,000 which is budgeted in the Street Department Maintenance Budget. The Town newsletter is published and distributed three times per year for an annual cost of approximately $8,000 which is budgeted in the Town Council Budget.

1997 ■ City of Chandler has increased the promotion of bicycle use, including conducting an annual Bike-to-Work Week. This year's promotion included incentives such as free bikes and bike equipment as well as other prizes for participation. Another program offered by the City, provides bicycles that have been confiscated by the police department to employees who commit to using bikes to commute to work. In addition, street design standards were revised in 1993 to require bike lanes on all newly-constructed arterial streets. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of El Mirage will look into promoting public/employee awareness of bicycle use as an alternative transportation to motor vehicles. The City will explore innovated ways, i.e., demonstration programs to promote bicycle use. The schedule for completing this work is as follows: February 1998-

Promote public/employee awareness of bicycle use. Funding for this program is determined in the City annual budget development process.

1997 ■ Town of Fountain Hills is identifying bikeway routes along arterials, collections, and local roadways and will be signing and striping such routes. The Town of Fountain Hills will promote bicycle travel by encouraging and requiring, where appropriate, both residential and commercial developers to provide bicycle lanes and/or trails within or adjacent to their projects. This measure will be implemented by the Town of Fountain Hills. Legal authority for this action is provided under ARS Section 9-240-"General Powers of Council". The schedule for completing this work is as follows: Year -1998 - Town-wide signing and striping.

Administration of plan development for this project will require staff time equivalent to 0.2 full-time employee, at an approximate cost of $8,000. This measure will be accomplished by current street maintenance department personnel under the adopted Town budget for FY 1997-1998. This estimated total cost for completion will be $20,000, consisting of $20,000 from approved Town budget, as programmed in the Town Capital Improvement Program.

This measure does not represent an ordinance, regulation, or rule requiring enforcement. Routine enforcement of traffic laws applicable to motorists and bicyclists on the affected streets will be provided by the Town Police Department. Maintenance of pavement and signage on the affected streets and bikeways will be provided by the Town Streets Department, under the Town's routine maintenance program.

1997 ■ Town of Gilbert encourages the use of bicycles for commuter trips and recreation through the planning and construction of striped, marked bike lanes in collector and arterial streets and off street improved trails. In 1996, these efforts were aided by:

- Spending $54,537 to develop the Town of Gilbert 1996-2001 Parks, Open Space and Trails Plan. The study includes an inventory of existing facilities and policies for the implementation of new bicycle trails and facilities.

- Spending $74,500 to develop an impact fee structure for new development. A portion of the revenue is earmarked for use by the Parks and Recreation Department who will budget a portion for expansion of the bicycle trail system.

- Programmed the use of approximately $1.08 million for the future expansion of the bicycle trail system as defined in the capital improvements plan.

- Spent $77,000 for the design and construction of bicycle trail improvements along the Western Canal.

- Constructed approximately 8.4 miles of arterial and collector streets that include additional width and striping for reserved bike lanes and approximately 5.6 miles of off-street bikepaths within private developments. The Town's system currently is 55 miles.

Implementations in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale promotes public/employee awareness of bicycle use as an alternative transportation to motor vehicles. The City will explore innovated ways, e.g., demonstration programs to promote bicycle use. In progress. The City has purchased an electric powered bicycle and an electric powered retryke (3 wheel cycle) to spark public and employee interest in bicycling. The electric powered bicycle and retryke are available for employees to use.

The City has started an employee bicycle club to provide employees more confidence to ride safely. The club will continue as long as there is employee interest. Bicycle club participants are rewarded with gifts based on miles traveled to work. The City currently provides employees with a bicycle if they promise to ride it to work on a regular basis. The City's Bicycling Coordinator is assigned to promote bicycle use. Funding for this program is determined in the City annual budget development process.

1997 ■ City of Goodyear will promote public/employee awareness of bicycle use as an alternative transportation to motor vehicles. The City will explore innovated ways, e.g., demonstration programs to promote bicycle use. In progress. The Southwest Valley Transportation Study has provided the City with recommendation on bike routes. A public committee will be established to initiate a bicycle awareness program. The committee will identify ways to promote bicycle travel and will present options to the City's Manager's Office, as appropriate. The City's public/employee committee is assigned to promote bicycle use. Funding for this program is determined in the City annual budget development process.

1997 ■ City of Mesa hired a Bicycle Coordinator in 1996. A Bicycle Plan has been developed that includes designs for additional bike lanes on arterials streets and bikepaths separated from the roadway throughout the City. In

conjunction with a federal aid project a bike path along one major east-west arterial will be developed with rest stops at City Parks.

The City distributes information on bike safety including educational and promotional flyers, posters and brochures, and conducts an annual bike event for employees to encourage the safe use of bicycles for commuting. The City installs and maintains bike facilities at City parks, bus terminals, and Park-and-Ride lots. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ Town of Paradise Valley encourages bicycle travel. The Town has installed bike racks at the Town facilities. There are bike maps available at the Town Hall. The Town's General Plan calls for bike lanes on newly constructed roadways. The Town's Trip Reduction Program encourages bike travel and pays employees $1.33 per day to employees who ride their bike to work. Implementation has been in progress for three years. The General Plan was revised in July 1997. Development and administration of the Trip Reduction Program Reduction Plan requires staff time equivalent to 0.20. A full-time exempt employee volunteers their services on off-hours, at a cost of zero. The annual budget for this measure is from the Town's General Fund.

1997 ■ City of Peoria adopted a bicycle route study in 1993 for implementation of a class two bike route. A class two bike route is provided by a striped bike lane or bike path on collector streets or along rivers or other waterways to connect major destinations such as City Hall, parks and schools. Each new development constructed along a collector street is required to stripe the street with a bike lane. Also, the City received a Federal Enhancement Grand to re-stripe City streets to designate a bike lane. This project will be completed in fall of 1997. Peoria attempts to include funding each year for the striping of City streets. Funding varies from year to year.

1997 ■ City of Phoenix encourages bicycle travel through a number of programs. The City has expanded the bikeway system from 75 miles in 1987 to approximately 422 miles in FY 1996-1997. The Phoenix Bikeway System includes bike lanes, bikeable streets, multi-use paths and grade-separated structures to facilitate bicycle travel in the Phoenix area. Approximately 19 additional miles of bikeways are scheduled for FY 1997-1998, raising the total system to approximately 441 miles. Additional bikes and facilities can be constructed if the voters approve the proposed half-cent sales tax in 1997.

The City publishes and distributes safety, educational, and promotional flyers, posters, brochures, and bike maps and conducts bike events to encourage safe use of bicycles and safe commuting. The City continues to install and maintain bike facilities at City parks, bus terminals, and Park-and-

Ride lots. Private developers and businesses are encouraged to include bike racks, lockers, and showers at work site and other facilities. The City has adopted street cross section standards which provide on-street bike lanes on almost all new arterial and collector streets.

The City is assisting Maricopa County in a pilot program, to provide free purple bikes (Purple People Movers) for use in the downtown area. This community bike program was created through a partnership of local governments, community organizations, and local businesses. The program estimates that over 100 purple bikes and 30 purple bike racks will be made available in the downtown area to encourage visitors, employees, tourists and residents to use bikes for short trips to get around downtown, rather than driving a car.

Implementation is in progress. Additional bikeways are scheduled for the 1997-1998 fiscal year. The Purple Bike Pilot Program began in April 1997. The City has designated a Bicycle Coordinator. AHUR funds, City bonds and federal grants provide the funding source for the Phoenix Bikeway Program. From 1987 through FY 1997-1998, the City invested approximately $5.3 million with approximately $300,000 annual expenditures. The annual investment of additional funding for bikeways will be available if the voters approve the half-cent sales tax in 1997.

1997 ■ City of Scottsdale considers bicycle transportation to be an integral part of citizen mobility. The City has an adopted Bicycle/Pedestrian Transportation Plan. The City encourages bicycle travel through a number of programs. Presently the City publishes and distributes a map of the multi-use path system which includes safety information. We also intend to publish a comprehensive map designed for bicycle commuters.

The City has a program, B.I.K.E.S., for employees to "earn" a donated bicycle by using it to commute to work a certain amount.

The City also has a program, Handlebar Helpers, for community youth and adults to "earn" donated bicycles through community volunteer work.

The City distributes safety, educational, and promotional flyers, posters, brochures, and bike maps and advertises bike events to encourage safe use of bicycles and safe commuting. The City continues to install and maintain bike facilities at City parks. Private developers and businesses are encouraged to include bike racks, lockers, and showers at work site and other facilities.

Implementation has been in progress since the early seventies. The Transit Division has developed five and ten-year CIP plans. If the voters approve

the sales tax increase for Transit in September 1997, then these plans can be accelerated and expanded. Funding is allocated through the biennial budget process. The City has designated a full-time Bicycle Coordinator. Funding comes from sales tax revenue, City bonds, other City funds, and federal grants. The City expects to spend approximately $1,000,000 for FY 1997-1999.

1997 ■ City of Tempe facilitates and promotes bicycle travel through a variety of programs. More than 85 miles of bikeways currently exist in Tempe; approximately 70 miles have been implemented since 1990. More than half of all collector and arterial streets in Tempe have a dedicated bicycle facility. These include bicycle lanes, routes, paths and wide outside curb lanes, grade separated crossings and canal crossing treatments. Installation of bicycle racks for parking is ongoing, and required with all new developments.

In the Spring of 1997, Tempe was recognized as a "Bicycle Friendly Community" by the League of American Bicyclists (LAB) and received a Silver Spoke award from the Governor's Task Force on Bicycles for outstanding contributions to bicycle facilities planning and engineering.

The City publishes and distributes safety, educational and promotional information to encourage the use of bicycles and safe commuting including: air quality brochures, a Tempe Bicycle Parking Requirement Guide, a bikeways map and a quarterly newsletter. A bicycle safety and educational video is currently being developed and will be available for public use. Tempe hosted numerous events during Valley Bike Week 1997, including the regions most well-attended Bike to Work and School Day. Tempe, additionally, hosts an annual Fall Tour de Tempe Bike Rally to showcase existing and new bikeways, and provide instruction for appropriate cycling.

The City of Tempe has included art into the design of bicycle lockers and racks. In an effort to improve the experience of the cyclist, four artist-designed bicycle racks have been installed in the Downtown Tempe area. Additionally, four artist-designed bicycle lockers are currently being completed and will be located at three City of Tempe sites. These projects are created through a partnership with the Tempe Arts Commission and the Transit Section.

In September 1996, Tempe citizens passed the sales tax for transit, thereby creating a dedicated source of funding for significant improvements to the local bus, bicycle and pedestrian programs. Additionally, in February 1997 the City hired an Alternative Modes Specialist, with responsibility for bicycle coordination.

Implementation is ongoing. Expansion of the Tempe Bikeway System is done in accordance with the Bicycle Plan. Bicycle racks are installed with new development, and promotional activities are held annually.

Transit Tax funds, federal grants and the City of Tempe Capital Improvement Program provide the funding source for the Tempe Bicycle Program. A base of $250,000 is earmarked from Transit Tax dollars annually. ISTEA and CMAQ grant monies have been used to supplement and maximize Tempe's funding.

1997 ■ Maricopa County indicates that this measure would involve the promotion of bicycle travel to reduce automobile use and improve air quality. One useful channel for public sector encouragement of bicycling is bikeway system planning. Identifying and publicizing appropriate routes for inter-city bike trips could help bicyclists avoid other, less safe facilities. Another area for potential actions is the development and distribution of educational materials, regarding bicycle use and safety.

Maricopa County Transportation Department, through its permit authority pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors) and A.R.S. Section 18-209, will continue to develop bicycle facilities and encourage bicycle travel. Maricopa County continues to do extensive planning for bicycle facilities throughout the County. Maricopa County will be updating their bicycle plan and completing an implementation plan by May 1998 to better help ensure that new bicycle facilities are built in the future. This is a very important encouragement to the residents who may choose to ride their bicycle in place of driving a car.

In the last revision to the Department of Transportation Design Manual (11/93), a complete bicycle facilities design chapter was added, and a requirement for provision of bike lanes or sufficient width for bike lanes was added for most types of roadways. Funding will be constrained by revenues received by Maricopa County from the Highway User Revenue Fund for capital projects.

Maricopa County also provides other types of encouragement through the distribution of the regional bicycle facilities map and the bicycle education that is provided as part of Traffic Engineering's Roadway Safety Program provided to school children all over Maricopa County. Ongoing program funded through existing County budget.

1997 ■ Regional Public Transportation Authority indicates that efforts will be targeted at the 1,250 employers with about 580,000 employees and students or all sites affected by the Maricopa County Trip Reduction Program (MCTRP) and the general public through the Regional Ridesharing Program. The following

materials are made available to employers to help them implement bicycle programs to employees and promote safe bicycling; A "How to Implement a Bicycle Program" manual, "Bike Rack Guide", bike helmet information, bike safety brochure, bike-on-bus brochure and bicycle safety education video. RPTA will also distribute up to 22,000 MAG Regional Bike maps in 1997-1998. RPTA will assist the Governor's Arizona Bicycle Task Force in sponsoring a bicycle conference and/or workshop that will be marketed to employers and the general public. The Regional Ridesharing Program will promote its computerized matching service to those who wish to bicycle with a companion to work. The Clean Air Campaign will co-sponsor and coordinate Valley Bike Week event.

The schedule for planned activities are as follows:

- Distribution of bicycle educational information is ongoing
- Bicycle matching program will be promoted through MCTRP trainings, workshop, the home page and employer sponsored transportation fairs
- Valley Bike week and conference are annual events

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

62. Development of Bicycle Travel Facilities

1997 ■ City of Avondale encourages bicycle travel through establishing bike lanes with new road development. The Avondale Bikeway System includes bike lanes, bikeable streets, multi-use paths and to facilitate bicycle travel in the Phoenix area. The City continues to install and maintain bike facilities at City parks, bus terminals, and Park and Ride lots. The City has adopted street cross section standards which provide on-street bike lanes on almost all new arterial and collector streets. Implementation is in progress. Additional bikeways are scheduled for the 1997-1998 fiscal year. The City has designated a Planner. Developers pay as development occurs.

1997 ■ City of Chandler revised its street design standards in 1993 to require bike lanes on all newly-constructed arterial streets. The City of Chandler is in the process of completing the implementation of bike lane striping of collector streets as recommended in the City's Bicycle Plan. Further, the City has re-striped portions of four arterial streets to provide north-south and east-west connectivity with other regional bike routes. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of El Mirage will maintain existing bicycle lanes and provide additional bicycle lane miles on the public street system and other areas, as appropriate. Implementation of the City's bicycle plan is currently in process. The City currently has approximately one mile of bicycle lanes in the City. The City Manager's Office is responsible for planning for and installing new bicycle lanes. Funding for this program is determined in the City's annual budget development process.

1997 ■ Town of Gilbert encourages the use of bicycles for commuter trips and recreation through the planning and construction of striped, marked bike lanes in collector and arterial streets and off street improved trails. In 1996, these efforts were aided by:

- Spending $54,537 to develop the Town of Gilbert 1996-2001 Parks, Open Space and Trails Plan. The study includes an inventory of existing facilities and policies for the implementation of new bicycle trails and facilities.

- Spending $74,500 to develop an impact fee structure for new development. A portion of the revenue is earmarked for use by the Parks and Recreation Department who will budget a portion for expansion of the bicycle trail system.

- Programmed the use of approximately $1.08 million for the future expansion of the bicycle trail system as defined in the capital improvements plan.

- Spent $77,000 for the design and construction of bicycle trail improvements along the Western Canal.

- Constructed approximately 8.4 miles of arterial and collector streets that include additional width and striping for reserved bike lanes and approximately 5.6 miles of off-street bikepaths within private developments. The Town's system currently is 55 miles.

Implementations in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale will maintain existing bicycle lanes and provide additional bicycle lane miles on the public street system. Implementation of the City's bicycle plan is currently in progress. The City currently has approximately 100 miles of bicycle lanes in the City. The City anticipates adding 10 miles of bicycle lanes in 1997. The City's Bicycling Coordinator and the Traffic Signs and Signals Division are responsible for planning and installing new bicycle lanes. Funding for this program is determined in the City's annual

budget development process. It costs the City approximately $3,000 per mile to add new bicycle lanes. The operational and maintenance cost for bicycle lanes is estimated at $1,500 per mile.

1997 ■ City of Goodyear will maintain existing bicycle lanes and provide additional bicycle lane miles on the public street system and other areas, as appropriate. Implementation of the City's bicycle plan is currently in progress. The City currently has approximately 24 miles of bicycle lanes in the City. Since roadways within the City's jurisdiction belong to MCDOT, the City is looking for County participation to create connectivity concerning bikeways. The City anticipates adding bicycle lanes as funding allows. The City's Public Works Department is responsible for planning for and installing new bicycle lanes. Funding for this program is determined in the City's annual budget process.

1997 ■ City of Mesa hired a Bicycle Coordinator in 1996. A Bicycle Plan has been developed that includes designs for additional bike lanes on arterials streets and bike paths separated from the roadway throughout the City. In conjunction with a federal aid project a bike path along one major east-west arterial will be developed with rest stops at City parks.

The City distributes information on bike safety including educational and promotional flyers, posters and brochures, and conducts an annual bike event for employees to encourage the safe use of bicycles for commuting. The City installs and maintains bike facilities at City parks, bus terminals, and Park-and-Ride lots. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of Peoria has adopted a bicycle route plan for the implementation of a class two bike lane. The class two bike lane is to be located on streets with lower traffic volume, such as collector streets. Lanes will be striped, bike decals installed and signed. Peoria will re-stipe sections of collector streets in the fall of 1997 and continue to have new lanes installed as development continues. The City of Peoria currently has $125,000 for re-striping certain streets. The City will continue to have new facilities installed each year as development occurs. The City will attempt to include funding each year in the CIP.

1997 ■ City of Phoenix encourages bicycle travel through a number of programs. The City has expanded the bikeway system from 75 miles in 1987 to approximately 422 miles in FY 1996-1997. The Phoenix Bikeway System includes bike lanes, bikeable streets, multi-use paths and grade-separated structures to facilitate bicycle travel in the Phoenix area. Approximately 19 additional miles of bikeways are scheduled for FY 1997-1998, raising the

total system to approximately 441 miles. Additional bikes and facilities can be constructed if the voters approve the proposed half-cent sales tax in 1997.

The City publishes and distributes safety, educational, and promotional flyers, posters, brochures, and bike maps and conducts bike events to encourage safe use of bicycles and safe commuting. The City continues to install and maintain bike facilities at City parks, bus terminals, and Park-and-Ride lots. Private developers and businesses are encouraged to include bike racks, lockers, and showers at work site and other facilities. The City has adopted street cross section standards which provide on-street bike lanes on almost all new arterial and collector streets.

The City is assisting Maricopa County in a pilot program, to provide free purple bikes (Purple People Movers) for use in the downtown area. This community bike program was created through a partnership of local governments, community organizations, and local businesses. The program estimates that over 100 purple bikes and 30 purple bike racks will be made available in the downtown area to encourage visitors, employees, tourists and residents to use bikes for short trips to get around downtown, rather than driving a car.

Implementation is in progress. Additional bikeways are scheduled for the 1997-1998 fiscal year. The Purple Bike Pilot Program began in April 1997. The City has designated a Bicycle Coordinator. AHUR funds, City bonds and federal grants provide the funding source for the Phoenix Bikeway Program. From 1987 through FY 1997-1998, the City has invested approximately $5.3 million with approximately $300,000 annual expenditures. The annual investment of additional funding for bikeways will be available if the voters approve the half-cent sales tax in 1997.

1997 ■ City of Scottsdale considers bicycle transportation to be an integral part of citizen mobility. The City has an adopted Bicycle/Pedestrian Transportation Plan. Our bikeway system is expanding through inclusion of bicycle facilities in Capital Improvement Projects, Flood Control Districts, new development, and specific bicycle projects. In 1990, the system had about 36 miles of off-road paved paths and two miles of bike lanes. Today the numbers would be 45 miles of path, and 35 miles on-street.

FY 1997-1998 is expected to add nine miles of separated path, three pedestrian/bicycle/equestrian bridges over three canals, and 15 miles on-street lanes and routes. Presently the City publishes and distributes a map designed for bicycle commuters.

The City of Scottsdale completed the Pima Bike Route from Fillmore Street to Chaparral Road within the past two years. The City of Scottsdale completed 8.5 miles of bike lanes, and three miles of multi-use paths within the past two years. The City of Scottsdale completed Phases II and III of the new Indian Bend Wash path, McCormick Parkway to MacDonald Drive within the past two years. Additional bikes and facilities can be constructed if the voters approve the proposed half-cent sales tax in 1997.

Implementation has been in progress since the early seventies. The Transit Division has developed five and ten-year CIP plans. If the voters approve the sales tax increase for Transit in September 1997, then these plans can be accelerated and expanded. Funding is allocated through the biennial budget process. The City has designated a full-time bicycle Coordinator. Funding comes from sales tax revenue, City bonds, other City funds, and federal grants. The City expects to spend approximately $1,000,000 for FY 1997-1999.

1997 ■ City of Tempe facilitates and promotes bicycle travel through a variety of programs. More than 85 miles of bikeways currently exist in Tempe; approximately 70 miles have been implemented since 1990. More than half of all collector and arterial streets in Tempe have a dedicated bicycle facility. These include bicycle lanes, routes, paths and wide outside curb lanes, grade separated crossings and canal crossing treatments. Installation of bicycle racks for parking is ongoing, and required with all new developments.

In the Spring of 1997, Tempe was recognized as a "Bicycle Friendly Community" by the League of American Bicyclists (LAB) and received a Silver Spoke award from the Governor's Task Force on Bicycles for outstanding contributions to bicycle facilities planning and engineering.

The City publishes and distributes safety, educational and promotional information to encourage the use of bicycles and safe commuting including: air quality brochures, a Tempe Bicycle Parking Requirement Guide, a bikeways map and a quarterly newsletter. A bicycle safety and educational video is currently being developed and will be available for public use. Tempe hosted numerous events during Valley Bike Week 1997, including the regions most well-attended Bike to Work and School Day. Tempe, additionally, hosts an annual Fall Tour de Tempe Bike Rally to showcase existing and new bikeways, and provide instruction for appropriate cycling.

The City of Tempe has included art into the design of bicycle lockers and racks. In an effort to improve the experience of the cyclist, four artist-designed bicycle racks have been installed in the Downtown Tempe area. Additionally, four artist-designed bicycle lockers are currently being completed and will be located at three City of Tempe sites. These projects

are created through a partnership with the Tempe Arts Commission and the Transit Section.

In September 1996, Tempe citizens passed the sales tax for transit, thereby creating a dedicated source of funding for significant improvements to the local bus, bicycle and pedestrian programs. Additionally, in February 1997 the City hired an Alternative Modes Specialist, with responsibility for bicycle coordination.

Implementation is ongoing. Expansion of the Tempe Bikeway System is done in accordance with the Bicycle Plan. Bicycle racks are installed with new development, and promotional activities are held annually. Transit Tax funds, federal grants and the City of Tempe Capital Improvement Program provide the funding source for the Tempe Bicycle Program. A base of $250,000 is earmarked from Transit Tax dollars annually, ISTEA and CMAQ grant monies have been used to supplement and maximize Tempe's funding.

1997 ■ Maricopa County indicates that the Transportation Element of the Maricopa County Comprehensive Plan encourages an efficient, integrated, accessible, environmentally sensitive, and safe Countywide multi-modal system that promotes transit, bikeways, and pedestrian travel. Bicycling is recognized as an alternative method of transportation for recreational and work trips. Increased use of bicycles could be accommodated with improved facilities, increased public awareness of safety issues, and through enforcement of traffic laws.

The following units could be used to measure attainment:

1. Number of bicycle trips per household.
2. Percentage of bicycle facilities used.

The Maricopa County Department of Planning and Development under A.R.S. Section 11-806 (County Planning and Zoning) is mandated to prepare a comprehensive plan that may include recommendations relative to the location of bicycle facilities.

The Comprehensive Plan is scheduled for adoption by the Maricopa County Board of Supervisors in 1997. Upon approval, implementation of items in the plan are foreseen to occur in an ongoing basis over the course of the planning horizon.

Funding is provided by existing Planning and Development Department budget through the Comprehensive Plan adoption process and with normal

Zoning/Plan Review staffing enforcement of the Zoning Code and Subdivision Regulations following adoption of the Plan.

1997 ■ Regional Public Transportation Authority indicates that previously, the RPTA has administered three bike rack distribution programs (for jurisdictions, employers, and the downtown community bike program). Subject to the availability of future federal funds and local match, the RPTA would administer a bike rack distribution program. RPTA will also:

- Assist in the coordination of the Purple Bike Program with the County Adult Probation Department to provide free bikes for short trips in downtown.
- Encourage employers to procure secured bike parking for employees.
- Provide for the use of bike racks on all RPTA fixed route buses.

All activities are ongoing. Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

63. Alternative Work Schedules

1997 ■ City of Avondale will offer alternative work schedules to employees to encourage off-peak driving and to accommodate the use of transit and ridesharing. The City management encourages department directors to meet and exceed the 85 percent participation rates defined in A.R.S. 49-454. Alternative work schedules are not limited to the time frame prescribed in the state law and are encouraged throughout the calendar year. Year-round alternative work schedule options are currently in progress. No additional funding is necessary to promote and monitor alternative work schedules.

1997 ■ Town of Cave Creek has already implemented a 9-80 flextime policy, which is an option for all existing employees. In addition, the Town's public works crew works a staggered schedule and therefore is not required to commute during peak hours. Fifty percent of the Town's work force participates in these programs.

1997 ■ City of Chandler has increased the number of employees who use alternate/flex work schedules or compressed work week schedules. Citywide, approximately 75 percent of all employees are on some type of alternate work week, with approximately 45 percent working a compressed

work schedule. Additionally, the City has recently begun a telecommuting pilot project in an effort to identify appropriate positions and employees for telecommuting opportunities. Results of the pilot will be evaluated to determine how the program can be improved and expanded. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of El Mirage will look into the use of alternative work hours, to include: (1) workdays that either begins between the hours of 6:00 a.m. to 8:30 a.m. or avoids ending between 4:30 p.m to 5:30 p.m.; and (2) compress work schedules, i.e., four ten-hour days or nine-day eight-hour pay period, to promote off-peak driving. Each City Department is responsible for establishing employee work schedules. Funding for this program is determined in the City's annual budget development process.

1997 ■ Town of Gilbert offers alternative work schedules to employees to encourage off-peak driving and to accommodate the use of Ridesharing. The Town management encourages department directors to meet and exceed the 85 percent participation rates defined in A.R.S. 49-454. Alternative work schedules are not limited to the time frame prescribed in the state law and are encouraged throughout the calendar year. Year around alternative work schedule options are currently in progress. No additional funding is necessary to promote and monitor alternative work schedules.

1997 ■ City of Glendale currently encourages the use of alternative work hours, including: 1) workdays that either begin at 7:30 a.m. and 8:30 a.m. or avoids ending between 4:30 p.m. to 5:30 p.m.; and 2) compressed work schedules, e.g., four ten-hour days or a nine-day eight-hour pay period, to promote off-peak driving. Currently in progress. Each City department is responsible for establishing employee work schedules. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Goodyear currently encourages alternative work hours which includes four-ten-hour days to promote off-peak driving. Another option currently being evaluated is the "work at home" concept. With the upgrades in technology, City-issued equipment would allow employees to work at home which would reduce travel time. Currently in progress. Each City department is responsible for establishing employee work schedules. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Mesa encourages the use of flexible or staggered work hours for its employees to promote off-peak driving and to accommodate the use of

transit and ridesharing. Use of alternate work schedules including a four-day, ten-hour work week and nine-day-80 hour plans are encouraged to reduce the number of peak-hour work trips per employee. Since 1996, the alternative work schedule program has been encouraged on a year-round basis. Year around alternative work schedule options are currently in progress. No additional funding is necessary to implement the alternate work schedules. Schedules are monitored on an individual departmental basis to insure that service levels are maintained throughout the City.

1997 ■ Town of Paradise Valley encourages alternative work schedules and offers the use of these schedules through the Maricopa County Trip Reduction Program. These schedules include 4-10 hour days, 9-day 80 hour weeks. The Town is in the process of developing a system for managers to have the capability to work at home as well. Over 70 percent of the Town's employees are currently on an alternative work schedule. All Town Departments participate in this program. Year-round alternative work schedule options are currently in progress. A full-time exempt employee volunteers their services on off-hours, at a cost of zero. The annual budget for this measure is from the Town's General Fund. Development and administration of the Trip Reduction Program Reduction Plan requires staff time equivalent to 0.20.

1997 ■ City of Peoria indicates that a 9-80 alternative work schedule will be implemented in FY 1997-1998 for overtime-exempt employees to help improve air quality in Maricopa County. The City of Peoria has already successfully implemented a 4 day, 10 hour work week for approximately 141 employees, or 20 percent of the workforce. In FY 1997-1998, the City of Peoria will expand the alternative work schedule program to include 9-80 plans for overtime-exempt employees. Overtime-exempt employees include department directors, mid-management, supervisory and technical employees, and other professionals.

The City of Peoria projects an additional 50 employees will participate in alternative work schedules by June 30, 1997. This will increase the total participation rate from 20 percent in FY 1996-1997 to 27 percent in FY 1997-1998. This will also provide an estimated reduction of 1,250 employee trips to the workplace. The following is the projected timeline for implementing the measure:

July to August 1997- Identify eligible overtime-exempt employees to participate in program; September 1997 - Kick off of 9-80 alternative work schedule program; March 1998 - Track program and evaluate success of measure; May 1998 - Make modifications, if any, to 9-80 program.

Implementation of the alternative work schedule measure requires no additional personnel or funding. Existing personnel in the Transit Division will absorb the direct costs, if any, of administering the alternative work schedule program.

1997 ■ City of Phoenix offers alternative work schedules to employees to encourage off-peak driving and to accommodate the use of transit and ridesharing. The City management encourages department directors to meet and exceed the 85 percent participation rates defined in A.R.S. 49-454. Alternative work schedules are not limited to the time frame prescribed in the state law and are encouraged throughout the calendar year. Year-round alternative work schedule options are currently in progress. No additional funding is necessary to promote and monitor alternative work schedules.

1997 ■ City of Scottsdale encourages alternative work schedules to employees to encourage off-peak driving or enhance service levels to our citizens. City management encourages department general managers and directors to meet and exceed the 85 percent participation rates defined in A.R.S. 49-454. Alternative work schedules are not limited to the time frame prescribed in the state law and are encouraged throughout the calendar year.

A June 1996 survey in response to Governor Symington's Air Pollution Emergency Proclamation showed that Scottsdale had 253 part-time and 1243 full-time employees. Of this number 390 worked alternative hours, 737 worked a compressed work week (9-80 or 4-10) and 137 traveled to and from work by means other than driving to work alone.

The May 9, 1997 year 7 Trip Reduction Plans for the two major campuses of City facilities reported that 514 employees (in excess of 1/3 total employee base) currently have alternative work schedules. Year-round alternative work schedule options are currently in progress. The City has designated a full-time Transportation Coordinator. The City of Scottsdale Biennial Budget includes Transit Budget increases of 48.8 percent and 18.9 percent respectively for FY 1997-1999 over the previous budgets. No additional funding is necessary to promote and monitor alternative work schedules.

1997 ■ City of Tempe indicates alternative work hours, or flextime, is currently used extensively throughout the City. In addition, staggered work hours are used. The City is creating and testing telecommuting as an option for applicable employees. Implementation is in progress. Funding is provided through the annual budget process.

1997 ■ City of Tolleson indicates that in an effort to reduce commuter traffic at peak travel times during the summer months, the City of Tolleson commits to

encourage the use of staggered work schedules that allow employees to select their own working hours with certain parameters. Measure is already in place. All employees of the City of Tolleson are encouraged to participate.

1997 ■ Town of Youngtown indicates that the Youngtown Police Department has implemented a 4-day, 10-hour work week. This practice will stagger personnel schedules; thus decreasing Town and personnel vehicle usage. Currently in operation. No additional personnel or funding is required by this implementation.

1997 ■ Maricopa County indicates that alternative work hours, or flextime, is an employer policy which enables workers to choose their own working hours within certain constraints. Flextime provides the opportunity for employees to use public transit, ridesharing, and other nonmotorized transportation. A related strategy, staggered work hours, is designed to reduce peak congestion in the vicinity of the workplace.

Pursuant to A.R.S. Section 11-251 (General Powers of Board of Supervisors), A.R.S. Section 49-588 and A.R.S. 49-474.01 the Board adopted Maricopa County Ordinance P-8 Reduction of Commuter Use of Motor vehicles by County Employees in 1992. The ordinance provides the County Administrative Officer with the authority to approve and implement non-financial measures and to implement budgeted measures to reduce employee commute trips or the number of miles driven by county employees to and from work.

Maricopa County conducted an employee awareness program in June 1996 and established goals of 90 percent participation in alternate modes for departmental employees. The County surveyed employees in the summer and again in the fall. This is an existing program administered by the designated transportation coordinator in the Human Resources Department. All supplemental costs for the outreach effort were absorbed by existing budgets.

1997 ■ Arizona Department of Transportation indicates that as mandated by A.R.S. 41-796.01, 49-474.01, and Arizona Administrative Code R2-1-601-605, ADOT follows the rules developed by the Director of the ADOA to establish adjusted work hours for at least 85 percent of employees in the nonattainment area for the period October 1 to April 1. In addition, ADOT will continue to provide employees year-round options of alternative work schedules where service to the public will not be affected. This measure is also a component of the Employer Rideshare Incentives Program. Refer to BACM 97-TC-6.

Statistical information compiled by ADOT for the period of October 1, 1996 through April 1, 1997 indicates that 90.2 percent of the 2,363 Phoenix area

ADOT employees were participating in various types of adjusted work hour programs in the nonattainment area. These programs included flextime, staggered work hours, 4-ten hour days, telecommuting, and the 9 day-80 hour program

No additional ADOT funding or employees were required to implement the above programs. Associated costs are covered by the ADOT administrative budget. Current adjusted work hours for ADOT employees in the Maricopa County nonattainment area reflect a 90.2 percent compliance with regulations. Compliance figures are required each year by ADOA. Programs will be monitored through the normal ADOT management reporting processes and reported to the ADOA as appropriate.

An additional reporting requirement this year will be a Telecommuting report from all Arizona agencies, boards, and commissions to report on their progress in achieving a goal of 15 percent of state employees in Maricopa County participating in the program by December 31, 1998.

For the purposes of describing the Commitment, ADOT through the Transportation Planning Group Air Quality Planner, will conduct a study to evaluate the availability of opportunities for employees to participate in the adjusted work hour, trip reduction, and telecommuting programs in the nonattainment areas. This will identify possible opportunities for increased participation by removing current barriers and also provide documented reasoned justification for those work areas that are not able to participate. The reporting unit will be the number of employees participating.

1997 ■ Regional Public Transportation Authority indicates that the RPTA facilitates up to one formal training bimonthly on compressed work weeks and/or alternative work schedules. Invited to these trainings are approximately 1,250 employers with about 580,000 employees and/or students at sites affected by the Maricopa County Trip Reduction Program. As needed, RPTA conducts special in-house training sessions and one-on-one assistance to employers. A "How to Implement a Compressed Work Week (CWW) Program" manual is available as part of the class. RPTA staff contacts employers affected by TRP to offer assistance several times annually, and is especially promoting the implementation of compressed work weeks to employers. A special mailing on compressed weeks to CEO's was mailed in 1997 with a brochure. A strong response from employers is generating follow up briefings and presentations to employer management committees. RPTA maintains an Internet web site with the following information on alternative work schedules:

- Do CWW produce more trips
- Picture Brochure
- Sample Employer Survey

- CWW's Impact on Air Pollution and Traffic Congestion
- Training Schedule
- Fact Sheet
- Research Findings

Formal MCTRP trainings will take place no less than an average of three times monthly. On-site assistance for individual employers is provided on an as-needed basis. Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

64. Land Use/Development Alternatives

1997 ■ City of Avondale is implementing an In-Fill Program to encourage development of single-family homes in the central parts of the City. The program provides fee waivers and expedited development reviews to projects meeting certain standards of quality. Developers are required to provide pedestrian paths per the open space plan.

In addition, the City of Avondale continues to implement general land use planning and development administration to improve the quality of life, promote land use compatibility, reduce infrastructure costs, promote accessibility, and reduce traffic congestion. Promotion of air quality is an integral part of this effort and a natural by-product.

The General Plan and Area Specific Plans encourages alternatives to single-occupancy vehicle trips and encourages shorter trips and fewer vehicle trips through land use policies; zoning and subdivision ordinances; zoning stipulations; and design review policies.

The City's planning and zoning program continue to support:

- Adoption and implementation of street classification policies requiring safe space for bicycles and pedestrians and encouragement of transit in residential or mixed-use areas.
- Designation of concentrated activity centers with emphasis on pedestrian and alternative forms of travel.
- Linkage of activity centers by transit and bikeways.
- Pedestrian access from transit stops into nonresidential uses and pedestrian access from neighborhoods into retail centers.
- Inclusion of traffic-demand-management strategies in projects generating large amounts of traffic.
- Development of trail systems Citywide through public and private dedications and financing.

The Community and Economic Development (CEDD) continues to promote projects to encourage land use planning goals and objectives through building permits and approval of plot plans. The City continues to implement street-scape improvements including landscaping, sidewalks, pedestrian lighting, bus pads and shelters, and directional signage.

Implementation is in progress. Public funded projects are included in the Capital Improvements Program adopted annually as part of the City's budget.

General Plan policies are revised or added as required. Zoning and subdivision ordinances are amended as needed. Zoning stipulations for privately financed development are approved in conjunction with rezoning cases continually. Single and multi-family development and nonresidential development on major streets undergo site plans and/or design reviews, based on their proximity to residential areas or specific zoning districts.

Planning and Zoning Department staff are funded through the City's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ Town of Gilbert has committed to ensuring land use development is planned with the pedestrian in mind by creating an interrelated set of development policies.

Staff drafted the Residential Subdivision Design guidelines that the Town Council adopted on September 10, 1996. The Town will use the document to encourage subdivision developers to create bicycle links between subdivisions and within planned bicycle trail corridors along canals and transmission easements.

The Town Council enacted a residential zoning moratorium on September 24, 1996. One of the stated reasons for the moratorium was to allow the Town time to incorporate goals and policies from the 1996-2001 Parks, Open Space and Trails Plan into the General Plan.

Implementation is in progress. Planning and Zoning Department staff are funded through the Town's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ City of Glendale indicates that the City's General Plan contains land use development policies that supports public transit and reduces travel distances. Currently in progress. The City's current General Plan contains several policies that encourages land use patterns which support public transit and reduces travel distances. General Plan policies are evaluated

and revised on an annual basis. The City's Planning Department is responsible for land use planning. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Goodyear indicates that the General Plan contains land use development policies that supports public transit and reduces travel distances. Currently in progress. A citizen's committee, with the help of local business representatives, will assist in evaluating the City's current General Plan. The General Plan contains several policies that encourages land use patterns which support public transit and reduces travel distances. General Plan policies are evaluated and revised on an annual basis. The City's planning department is responsible for establishing employee work schedules. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Mesa indicates that the Mesa General Plan outlines goals, objectives and policies to promote a balanced transportation system that serves the needs of diverse economic, social, physical and geographical needs of Mesa's present and future residents. The City has an ongoing program to redevelop the downtown area. A major aspect of that planning process is a re-design of the downtown commercial and cultural area to encourage and promote pedestrian travel.

The City is also pursuing the installation of new industrial and commercial developments to enhance and expand the local employment base. One of the goals of this efforts is to decrease the percentage of Mesa residents that must travel to employment sites outside of the City. Implementation is ongoing. New developments are regulated by the General Plan. Zoning and Planning and Community Development is responsible for developing and administering development policies and the General Plan and is funded through the annual budget process.

1997 ■ Town of Paradise Valley indicates that the Town's general land use planning and one house per acre zoning requirement is a land use that contributes to, and promotes clean air by limiting the number of homes that could be built. The promotion of air quality is an integral part of the Town's commitment to reduce pollution. The Town's General Plan was recently revised and includes the implementation of landscaping, sidewalk, and recreation paths that encourage alternative modes of transportation throughout the Town. The Special Use Permit process now prohibits any use that will result in adverse pollution. Town of Paradise Valley, Planning Department. Implementation in progress. Personnel include the Town Planner, Town Zoning Administrator, Town Engineer. Annual budget, general fund.

1997 ■ City of Peoria (through SPANS) will begin their annual update of the Peoria Comprehensive Master Plan in September 1997. At that time, staff will analyze the various use categories and land use policies to ensure the land use/development alternatives are supporting public transit and other alternative modes of transportation. Further, the Current Planning Division of Community Development will review all land use applications ensuring that alternative modes of transportation (e.g., bus bays, bike paths, sidewalks) are being obtained when possible. Three full time staff members are assigned to the General Plan update and analysis. Four full time staff members are assigned to land use application reviews in Current Planning. The funding sources are through the City budget process which is not under review by the Peoria City Council.

1997 ■ City of Phoenix is implementing an In-Fill Program to encourage development of single-family homes in the central parts of the City. The program provides fee waivers and expedited development reviews to projects meeting certain standards of quality and has assisted with the construction of 450 homes during 1996 and 1997.

The City is also assessing impact fees on new development located in the northern and southern peripheral areas of the City at the time of building permit issuance. These fees are to help cover the cost of facilities to serve development in the areas covered by specific infrastructure financing plans. In 1996, the City updated the plans and raised the fees. Since these fees are not charged citywide, there is an incentive for development to locate in areas closer to most employment and services.

In addition, the City of Phoenix continues to implement general land use planning and development administration to improve the quality of life, promote land use compatibility, reduce infrastructure costs, promote accessibility, and reduce traffic congestion. Promotion of air quality is an integral part of this effort and a natural by-product.

The General Plan encourages alternatives to single-occupancy vehicles trips and encourages shorter trips and fewer vehicle trips through land use policies; zoning and subdivision ordinances; zoning stipulations; and design review policies.
The City's planning and zoning programs continue to support:

- Adoption and implementation of street classification policies requiring safe space for bicycles and pedestrians and encouragement of transit in residential or mixed-use areas.

- Designation of concentrated activity centers (village cores) with emphasis on pedestrian and alternative forms of travel.
- Linkage of activity centers by transit and bikeways.

- Pedestrian access from transit stops into nonresidential uses and pedestrian access from neighborhoods into retail centers.
- Inclusion of traffic-demand-management strategies in projects generating large amounts of traffic.

- Designation of locations for Park-and-Ride lots and other transit facilities.

- Development of trail systems citywide through public and private dedications and financing.

The Community and Economic Development Department (CEDD) continues to promote projects to encourage land use planning goals and objectives through building permits and approval of plot plans. The City continues to implement street-scape improvements including landscaping, sidewalks, pedestrian lighting, bus pads and shelters, and directional signage.

Implementation is in progress. The In-Fill Program and revised development fees began in 1996. Public funded projects are included in the Capital Improvements Program adopted annually as part of the City's budget. General Plan policies are revised or added annually. Zoning and subdivision ordinances are amended as needed. Zoning stipulations for privately financed development are approved in conjunction with rezoning cases continually. Multi-family development and nonresidential development on major streets undergo site plans and/or design reviews, based on their proximity to residential areas or specific zoning districts. Planning and Zoning Department staff are funded through the City's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale continues to implement general land use planning and development administration to improve the quality of life, promote land use compatibility, reduce infrastructure costs, promote accessibility, and reduce traffic congestion. Promotion of air quality is an integral part of this effort and a natural by-product.

The General Plan is currently being studied for revision. Revised air guidelines could include continued promotion of mass transit alternatives, future land use development and community design policy recommendations which specifically recognize air quality benefits of certain land use patterns.

The Circulation Element of the General Plan encourages alternatives to single-occupancy vehicle trips and encourages shorter trips and fewer

vehicle trips through land use policies; zoning and subdivision ordinances; zoning stipulations; and design review policies. The Transportation Departments objectives for 1997-1999 is to update the Circulation Element of the General Plan.

The City of Scottsdale continues to promote projects to encourage land use planning goals and objectives through building permits and approval of plot plans. The City continues to implement streetscape improvements including landscaping, sidewalks, pedestrian lighting, bus pads and shelters, and directional signage. Implementation is in progress. City of Scottsdale, Community Planning, Community Development, Redevelopment, Economic Development and Transportation staff are funded in the Biennial Budget for FY 1997-1999.

1997 ■ City of Tempe indicates that the recently adopted Tempe General Plan 2020 is committed to encourage City growth through in-fill development, land re-use and redevelopment efforts. This is especially critical to Tempe, since it is a land-locked community with less than 10 percent land available for development. The General Plan 2020 goals which support this measure include:

- Develop and implement a Comprehensive Multi-modal Circulation Plan which provides mobility for all, complements land use and improves air quality. This includes the development of evaluation standards for arterial streets, the development of a multi-modal streets and travelways plan, and the development of a pedestrian plan. The Bicycle and Transit plans have already been developed.
- Promote land development that integrates multiple modes of transportation, including transit, pedestrians and bicycles.
- Create ordinances policies or design guidelines that support the Comprehensive Multi-modal Circulation Plan. In addition, development-related documents and review processes will be revised to encourage transit oriented development with new projects or redevelopment projects.
- Encourage mixed use development and promotion of non-polluting modes of travel into urban design.

Tempe has a very successful track record in implementing development projects in the downtown area. Over the next five years, there are an estimated 16 in-fill development projects which will bring over 2,000,000 square feet of mixed use development, 260 hotel rooms, and 700 housing units to the downtown area.

The City currently promotes pedestrian travel by improving pedestrian facilities such as the Mill Avenue and University Drive Pedestrian Enhancement projects which include improved landscaping, sidewalks, pedestrian lighting, and signage. The City will continue to improve pedestrian facilities and provide transit shelters at bus stops with a portion of the transit sales tax monies.

The Development Services Department has recently created several new higher residential zoning districts and is in process of creating new zoning districts within the City which emphasize mixed use and encourage transit oriented locations. They will also continue to promote in-fill mixed use development projects in the downtown area. The Public Works Department, Transportation Division is hiring a planner to develop transit oriented guidelines and participate in the development review process. In September 1996, Tempe citizens passed the Tempe Transit Tax, thereby creating a dedicated source of funding for significant improvements to the local bus, bicycle and pedestrian programs. This revenue will allow the City to hire the additional planner position. The zoning work is being accomplished by current Development Services staff and funding is provided through the annual budget process.

1997 ■ Maricopa County indicates that the Land Use Element of the Maricopa County Comprehensive Plan encourages efficient land development that is compatible with adjacent land uses, well integrated with the transportation system, and sensitive to the natural environment. The Department of Planning and Development may integrate transportation planning with existing and future land use and promote the use of Development Master Plans (DMPs). DMP design plans strive to reduce the dependency on automobiles and consider alternative transportation modes such as transit, bikeways, equestrian trails, and pedestrian networks.

The following units could be used to measure attainment:

1. Number of vehicle trips per dwelling unit.
2. Average trip length compared to existing developments.

The Maricopa County Department of Planning and Development through its comprehensive plan has the authority under Arizona Revised Statutes Section 11-806 (County Planning and Zoning) and additionally from its authority to adopt and enforce Zoning ordinance provisions under A.R.S. Section 11-808 and A.R.S. Section 11-821.B.

The Comprehensive Plan is scheduled for adoption by the Maricopa County Board of Supervisors in 1997. Upon approval, implementation of items in the

plan are foreseen to occur on an ongoing basis over the course of the planning horizon. Funding is provided by existing Planning and Development Department budget through the Comprehensive Plan adoption process and with normal Zoning/Plan Review staffing enforcement of the Zoning Code and Subdivision Regulations following adoption of the Plan.

1997 ■ Regional Public Transportation Authority publishes a Passenger Facilities Handbook. This guide explains and blueprints off-street improvements for transit. Information is disseminated to assist local land planners, designers and developers on techniques for facilitating transit service delivery and encouraging transit patronage in new developments.

The RPTA will continue to work with member jurisdictions, land planners, designers, and developers to develop new transit facilities when needed. Assistance with the development of off-street improvements for transit is included within the ongoing annual budget of the RPTA.

65. Encouragement of Pedestrian Travel

1997 ■ City of Avondale is implementing an In-Fill Program to encourage development of single-family homes in the central parts of the City. The program provides fee waivers and expedited development reviews to projects meeting certain standards of quality. Developers are required to provide pedestrian paths per the open space plan.

In addition, the City of Avondale continues to implement general land use planning and development administration to improve the quality of life, promote land use compatibility, reduce infrastructure costs, promote accessibility, and reduce traffic congestion. Promotion of air quality is an integral part of this effort and a natural by-product.

The General Plan and Area Specific Plans encourages alternatives to single-occupancy vehicle trips and encourages shorter trips and fewer vehicle trips through land use policies, zoning and subdivision ordinances, zoning stipulations, and design review policies.

The City's planning and zoning program continue to support:

- Adoption and implementation of street classification policies requiring safe space for bicycles and pedestrians and encouragement of transit in residential or mixed-use areas.
- Designation of concentrated activity centers with emphasis on pedestrian and alternative forms of travel.
- Linkage of activity centers by transit and bikeways.

- Pedestrian access from transit stops into nonresidential uses and pedestrian access from neighborhoods into retail centers.
- Inclusion of traffic-demand-management strategies in projects generating large amounts of traffic.
- Development of trail systems Citywide through public and private dedications and financing.

The Community and Economic Development Department (CEDD) continues to promote projects which encourage land use planning goals and objectives through building permits and approval of plot plans. The City continues to implement street-scape improvements including landscaping, sidewalks, pedestrian lighting, bus pads and shelters, and directional signage.

Implementation is in progress. Public funded projects are included in the Capital Improvements Program adopted annually as part of the City's budget.
General Plan policies are revised or added as required. Zoning and subdivision ordinances are amended as needed. Zoning stipulations for privately financed development are approved in conjunction with rezoning cases continually. Single and multi-family development and nonresidential development on major streets undergo site plans and/or design reviews, based on their proximity to residential areas or specific zoning districts.

Planning and Zoning Department staff are funded through the City's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ Town of Carefree is a semi-rural community with a population of approximately 2300 residents located on the north edge of the Phoenix metropolitan area. Approximately 96 percent or 48 miles of its 50 miles of streets are paved. The Town of Carefree has an ongoing maintenance program of mowing and trimming the shoulders of the streets to provide for full usage of street surfaces for vehicles, bicycles, and pedestrians. The Town of Carefree will continue to encourage bicycle and pedestrian travel and public awareness through its newsletter.
This measure will be implemented by the Town of Carefree. Legal authority for this action is provided under Section 9-240-3(c) of the Arizona Revised Statutes. The maintenance of the streets and shoulders is continuous. The encouragement of bicycle and pedestrian travel and public awareness announcements will be periodical. The shoulder maintenance will be inspected periodically by the Street Superintendent who will provide reports to the Town Administrator.

The annual cost of mowing and trimming the street shoulders is approximately $15,000 which is budgeted in the Street Department Maintenance Budget. The Town newsletter is published and distributed

three times per year for an annual cost of approximately $8,000 which is budgeted in the Town Council budget.

1997 ■ Town of Fountain Hills agrees to encourage pedestrian travel within its commercial core and other areas. Developers that seek site plan approval for commercial development will be encouraged to provide easy and comfortable pedestrian connections with other commercial buildings in downtown Fountain Hills, thereby encouraging easy and comfortable pedestrian travel within the core. To the extent possible within existing deed restrictions, the development of common parking lots for the commercial core will be encouraged. The Town of Fountain Hills may also encourage developers to provide additional sidewalks where needed in multi-family and single family zoned areas to complete proposed pedestrian walking routes.

This measure will be implemented by the Town of Fountain Hills Engineering Department. Legal authority for this action is provided under ARS Section 9-240- "General Power of Council". Encouragement of pedestrian travel will be integrated in the Fountain Hills' General Plan. Since most of the commercial core, including the streets, is privately owned, the implementation schedule depends in large part upon the development of that core by private owners. Fountain Hills has little control over the timing of either commercial or multi-family development.

Administration of plan development for this project will require staff time equivalent to 0.2 full-time employee, at an approximate cost of $8,000. This will be accomplished by current department personnel under the adopted Town budget for FY 1997-1998. This estimated total cost for construction will be $30,000, form the approved Town budget, as programmed in the Town Capital Improvement Program, plus substantial developer stipulations. This measure does not represent an ordinance, regulation, or rule requiring enforcement. Maintenance of sidewalks will be provided by the Town of Fountain Hills Street Department under the Town's routine maintenance program.

1997 ■ Town of Gilbert has committed to ensuring land use development is planned with the pedestrian in mind by creating an interrelated set of development policies.

- Staff drafted the Residential Subdivision Design Guidelines that the Town Council adopted on September 10, 1996. The Town will use the document to encourage subdivision developers to create bicycle links between subdivisions and within planned bicycle trail corridors along canals and transmission easements.

- The Town Council enacted a residential zoning moratorium on September 24, 1996. One of the stated reasons for the moratorium was to allow the Town time to incorporate goals and policies from the 1996-2001 Parks, Open Space and Trails Plan into the General Plan.

Implementation is in progress. Planning and Zoning Department staff are funded through the Town's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ City of Glendale indicates that the City's General Plan contains policies that encourage pedestrian travel. Currently in progress. The City's current General Plan contains policies that encourage land use patterns that encourage pedestrian travel. General Plan policies are evaluated and revised on an annual basis. The City's Planning Department is responsible for land use planning. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Goodyear indicates that the City's General Plan contains policies that encourage pedestrian travel. The City is considering a open space plan which will feature pedestrian walkways, bikeways, and equestrian trails. Currently in progress. The City's current General Plan contains policies that encourage land use patterns that encourage pedestrian travel. General Plan polices are evaluated and revised on an annual basis. The City's Planning Department is responsible for land use planning. Funding for this program is determined in the City's annual budget process.

1997 ■ City of Peoria indicates that this process is ongoing through the review of capital improvement projects, subdivision and site plan review, and assisting the school districts in their long term planning. Every project is now analyzed to ensure that development is encouraging pedestrian travel. Conditions of approval for all site plans and subdivisions include sidewalks and pathways. All land use development applications are referred to the appropriate school district to enable them to better locate their school sites to serve the neighborhoods. Further, the Public Works Department sponsors a clean air campaign which encourages the use of pedestrian travel. This campaign involves contacting the majority of Peoria citizens through promotional efforts.

The Public Works Department employs seven full time staff members who review capital improvement projects, site plans and subdivisions. One full time employee oversees the public transit division and oversees promotional efforts. The Current Planning Division of the Community Development

Department employs four full staff time members who review site plans and subdivisions as well as work with the School District planners.

1997 ■ City of Phoenix is implementing an In-Fill Program to encourage development of single-family homes in the central parts of the City. The program provides fee waivers and expedited development reviews to projects meeting certain standards of quality and has assisted with the construction of 450 homes during 1996 and 1997.

The City is also assessing impact fees on new development located in the northern and southern peripheral areas of the City at the time of building permit issuance. These fees are to help cover the cost of facilities to serve development in the areas covered by specific infrastructure financing plans. In 1996, the City updated the plans and raised the fees. Since these fees are not charged citywide, there is an incentive for development to locate in areas closer to most employment and services.

In addition, the City of Phoenix continues to implement general land use planning and development administration to improve the quality of life, promote land use compatibility, reduce infrastructure costs, promote accessibility, and reduce traffic congestion. Promotion of air quality is an integral part of this effort and a natural by-product.

The General Plan encourages alternatives to single-occupancy vehicle trips and encourages shorter trips and fewer vehicle trips through land use policies, zoning and subdivision ordinances, zoning stipulations, and design review policies.

The City's planning and zoning programs continue to support:

- Adoption and implementation of street classification policies requiring safe space for bicycles and pedestrians and encouragement of transit in residential or mixed-use areas.

- Designation of concentrated activity centers (village cores) with emphasis on pedestrian and alternative forms of travel.

- Linkage of activity centers by transit and bikeways.

- Pedestrian access from transit stops into nonresidential uses and pedestrian access from neighborhoods into retail centers.
- Inclusion of traffic-demand-management strategies in projects generating large amounts of traffic.

- Designation of locations for Park-and-Ride lots and other transit facilities.

- Development of trail systems citywide through public and private dedications and financing.

The Community and Economic Development Department (CEDD) continues to promote projects to encourage land use planning goals and objectives through building permits and approval of plot plans. The City continues to implement streetscape improvements including landscaping, sidewalks, pedestrian lighting, bus pads and shelters, and directional signage.

Implementation is in progress. The In-Fill Program and revised development fees began in 1996. Public funded projects are included in the Capital Improvements Program adopted annually as part of the City's budget. General Plan policies are revised or added annually. Zoning and subdivision ordinances are amended as needed. Zoning stipulations for privately financed development are approved in conjunction with rezoning cases continually. Multi-family development and nonresidential development on major streets undergo site plans and/or design reviews, based on their proximity to residential areas or specific zoning districts. Planning and Zoning Department staff are funded through the City's General Fund which is partially supported by rezoning and other development fees. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale considers pedestrian travel to be an integral part of citizen mobility. The City has an adopted Bicycle/Pedestrian Transportation Plan. Presently the City publishes and distributes a map of the multi-use path system which includes safety information.

The Circulation Element of the General Plan encourages alternatives to single-occupancy vehicle trips and encourages shorter trips and fewer vehicle trips through land use policies; zoning and subdivision ordinances; zoning stipulations; and design review policies. The Transportation Department's objectives for 1997-1999 is to update the Circulation Element of the General Plan.

Implementation is in progress. Planning and Zoning Department staff are funded in the Biennial Budget for FY 1997-1999.

1997 ■ City of Tempe indicates that the recently adopted Tempe General Plan 2020 is committed to encourage City growth through in-fill development, land re-use and redevelopment efforts. This is especially critical to Tempe, since it is a land-locked community with less than 10 percent land available for

development. The General Plan 2020 goals which support this measure include:

- Develop and implement a Comprehensive Multi-modal Circulation Plan which provides mobility for all, complements land use, and improves air quality. This includes the development of evaluation standards for arterial streets, the development of a multi-modal streets and travelways plan, and the development of a pedestrian plan. The Bicycle and Transit plans have already been developed.

- Promote land development that integrates multiple modes of transportation, including transit, pedestrians, and bicycles.

- Create ordinance policies or design guidelines that support the Comprehensive Multi-modal Circulation Plan. In addition, development-related documents and review processes will be revised to encourage transit oriented development with new projects or redevelopment projects.

- Encourage mixed use development and promotion of non-polluting modes of travel into urban design.

Tempe has a very successful track record in implementing development projects in the downtown area. Over the next five years, there are an estimated 16 in-fill development projects which will bring over 2,000,000 square feet of mixed use development, 260 hotel rooms, and 700 housing units to the downtown area.

The City currently promotes pedestrian travel by improving pedestrian facilities such as the Mill Avenue and University Drive Pedestrian Enhancement projects which include improved landscaping, sidewalks, pedestrian lighting, and signage. The City will continue to improve pedestrian facilities and provide transit shelters at bus stops with a portion of the transit sales tax monies.

The Development Services Department has recently created several new higher residential zoning districts and is in process of creating new zoning districts within the City which emphasize mixed use and encourage transit oriented locations. They will also continue to promote in-fill mixed use development projects in the downtown area. The Public Works Department, Transportation Division is hiring a planner to develop transit oriented guidelines and participate in the development review process.

In September 1996, Tempe citizens passed the Tempe Transit Tax, thereby creating a dedicated source of funding for significant improvements to the local bus, bicycle and pedestrian programs. This revenue will allow the City

to hire the additional planner position. The zoning work is being accomplished by current development services staff and funding is provided through the annual budget process.

1997 ■ City of Tolleson encourages pedestrian travel among its citizens and employees. This measure will be strengthened by further raising awareness via the Tolleson Flyer, the City Newsletter, outlining the benefits of walking as well as other alternative modes of transportation. The scheduled duration of this measure encompasses the months of September through December 1997 and March through June 1998. City of Tolleson General Funds, approximately $7,600 yearly for newsletter publication.

1997 ■ Maricopa County indicates that the Transportation Element of the Maricopa County Comprehensive Plan encourages an efficient, integrated, accessible, environmentally sensitive, and safe County-wide multi-modal system that promotes transit, bikeways, and pedestrian travel. Provisions for pedestrian travel are included in the plan. Walking is recognized as a useful mode of travel for school, convenience shopping, recreation, social, and work trips and can be accommodated with improved facilities and appropriate urban design.

The following units could be used to measure attainment:

1. The percentage of Development Master plans constructed with pedestrian enhancements.

2. Average vehicle trips per household compared to existing developments.

The Maricopa County Department of Planning and Development under Arizona Revised Statutes Section 11-806 (County Planning and Zoning) is mandated to prepare a comprehensive plan that may include recommendations relative to the location of bicycle facilities.

The Comprehensive Plan is scheduled for adoption by the Maricopa County Board of Supervisors in 1997. Upon approval, implementation of items in the plan are foreseen to occur on an ongoing basis over the course of the planning horizon.

Funding is provided by existing Planning and Development Department budget through the Comprehensive Plan adoption process and with normal Zoning/Plan Review staffing enforcement of the Zoning Code and Subdivision Regulations following adoption of the Plan.

1997 ■ Regional Public Transportation Authority indicates that the RPTA will encourage pedestrian travel. Educational efforts including a "Pedestrian Friendly Guidebook" and "Livable Cities" presentation will be targeted at approximately 1,250 employers with sites affected by the Maricopa County Trip Reduction Program. RPTA will assist and co-host a pedestrian conference with MAG.

The Regional Public Transportation Authority as the regional transit agency for Maricopa County (A.R.S. 48-5101) provides these services to improve mobility and air quality. The schedule for planned promotional activities are as follows:

- MCTRP employer trainings
- Information will be distributed through transportation (information) fairs
- Co-host the annual Pedestrian Conference with MAG

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

66. Restrictions on the Use of Gasoline-Powered Blowers for Landscaping Maintenance

1997 ■ City of Avondale indicates that the Community Development Department continues to have a policy to avoid the use of blowers for City landscaping activities. The operations have generally been replaced with vacuums and brooms. Desert landscaping will continue to be used where practical to reduce the need for mowing and other lawn care. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Buckeye indicates that desert landscaping will be encouraged to reduce the need for blowers. City ordinance disallows for the use of blowers. The Public Works Department is already implementing this measure, ongoing. Funding is provided through the Town's General Fund.

1997 ■ City of Chandler will reduce the use of gasoline powered blowers by City employees during FY 1998. As contracts for the maintenance of City owned property are re-bid, the City will work with contractors to use cleaner-burning equipment; specifically, motors that comply with either "CARB 95" or "EPA Phase I" standards. Implementation will be ongoing. Funding is allocated through the annual budget process.

1997 ■ City of El Mirage currently does not use any gasoline-blowers for landscape maintenance on City facilities. If the need arises to purchase blowers, the City will explore the possibility of restricting the use of gasoline-blowers. Implementation as needed. The City's Parks Maintenance and Streets Department will provide the evaluations. Funding for the implementation of this measure is determined in the City's annual budgeting process.

1997 ■ Town of Gilbert commits to adopt restrictions on the use of blowers concurrently with the county and other municipalities. The Town will consider purchasing a vacuum during FY 1997-1998. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Glendale will explore the possibility of restricting the use of gasoline-blowers for landscape maintenance on City facilities. In progress and as needed. The City's Parks Maintenance and Right-of-Way divisions will provide the evaluations. Funding for the implementation of this measure is determined in the City's annual budgeting process.

1997 ■ City of Goodyear will explore the possibility of restricting the use of gasoline-blowers for landscaping maintenance on City facilities. In progress as needed. The City's Parks Maintenance and Right-of-Way divisions will provide the evaluations. Funding for the implementation of this measure is determined in the City's annual budgeting process.

1997 ■ City of Phoenix continues to have a policy to avoid the use of blowers for City landscaping activities. The operations have generally been replaced with vacuums and brooms. Desert landscaping will continue to be used where practical to reduce the need for mowing and other lawn care. In 1994, the citizen-based City's Environmental Quality Commission studied options for restrictions on blowers used by private citizens and businesses. The Commission recommended that the City should not adopt restrictions on private use landscape blowers based on the emerging EPA standards for non-road engines and the information available on relative contribution of this activity to PM-10 levels. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale Community Maintenance and Recreation Department no longer uses gas-powered leaf blowers to maintain landscaping in the Civic Center Mall. Various options including vacuums, brooms, and use of electric powered equipment have been piloted.

City contracts with landscape maintenance companies for the Civic Center Mall prohibit use of gas-powered leaf blowers. City contract for cleaning and

maintenance of Scottsdale Stadium prohibits use of gas-powered leaf blowers (except for 6 select dates during the year).

The City now purchases 4-stroke lawnmowers to replace older mowers. The City will consider options for a pilot program to evaluate alternatively powered lawn-care equipment, including hydrogen powered and electric powered equipment.

Widespread use of desert landscaping will continue where practical to reduce the need for mowing and other lawn care.

The City of Scottsdale Environmental Management Office (EMO) has studied options for restrictions on blowers used by private citizens and businesses. EMO will consider recommending a voluntary scrappage program for gas-powered leaf blowers, rather than recommending that the City adopt restrictions on private use landscape blowers. These recommendations will be based on: The emerging EPA standards for non-road engines and the information available on relative contribution of this activity to PM-10 and PM-2.5 air pollution levels. Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Surprise will utilize electric blowers where power is reasonably available. In addition, the City recently purchased a chipper/vac ($1,700) as an alternative to blowing. The City will purchase an electric blower in FY 1998. Funding for this measure will come from the City's General Fund.

1997 ■ City of Tempe currently allows gas blowers to be used only in the downtown area, and only during certain hours, generally before 6:00 a.m. This action is part of the Downtown Merchants Association agreement and will continue to be enforced. Other areas of the City are blown less frequently, and only during the early morning hours. Electrical equipment is used wherever possible.

The City continues to avoid the use of gas powered landscape equipment as much as possible. Many operations are generally being done by brooms. Desert landscaping will continue to be used where practical to reduce the need for mowers and blowers.

Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Wickenburg will utilize alternative blowers in maintenance of its parks and recreational facilities insofar as it is practical. Some of these facilities are so located, however, that electrical power is not practical.

As present equipment wears out, efforts will be made to replace gasoline-powered blowers with electrical blowers. However, as above mentioned, there are facilities outside the reach of electrical power. Funding will come from the Town's General Fund, which annually includes appropriation for capital equipment.

67. Alternative Fuels for Fleets

1997 ■ Regional Public Transportation Authority indicates that State law (A.R.S. Section 49-571; Clean Burning Fuel Requirements for New Buses; 1992) requires a city, town, or county which purchases buses for use in a county with a population of more than five hundred thousand persons from and after December 31, 1993 shall only purchase buses which operate on clean burning alternative fuel. RPTA purchases only alternatively fueled buses for operation by its contractors.
RPTA, and its member agencies, have already begun an aggressive campaign to purchase, convert, and replace older, higher polluting Diesel buses. The regional transit fleet now consists of 52 dedicated compressed natural gas (CNG) vehicles, 43 bifuel CNG/gas dial-a-ride vehicles, 11 propane powered dial-a-ride vehicles, and one electric bus.

Future commitments include the pending delivery of 180 low floor, forty-foot buses. These vehicles should be delivered beginning May 1998 and will operate solely on liquefied natural gas (LNG). The City of Tempe is expecting delivery of nine, thirty-five foot buses and 15 thirty-foot buses which shall also operate on LNG.

A retrofit program has already replaced the engines of 75 middle aged buses with clean burning Diesel engines and oxidation catalysts that meet 1994 EPA Urban Bus Heavy-Duty Engine Standards. Sixty-seven (67) of these buses belong to the City of Phoenix and eight are owned by the RPTA.

This measure represents an ordinance. Funding shall come from the RPTA and member agency capital improvement budgets. Incremental costs for alternative fueled vehicles may be reimbursed by the Arizona Department of Commerce Energy Office through the Clean Air Fund.

68. Areawide Public Awareness Programs

1997 ■ Regional Public Transportation Authority indicates that an areawide public awareness program will be targeted to the almost 1,250 employers with about 580,000 employees and students for all sites affected by the Maricopa County Trip Reduction Program, employers not affected by TRP and the general public through the Clean Air Campaign. Employer promotional kits are mailed to 1,250 employers with 2,500 sites up to four times per year.

There is paid radio and TV advertising for eight weeks during the winter pollution season. Events will be conducted to increase awareness of alternative modes of transportation and work schedules through Rideshare Week and Valley Bike Week. Workshops will be held to increase participation in Clean Air Campaign events.

By Arizona Statute 49-506, Maricopa County must conduct a voluntary no-drive day campaign. Maricopa County contracts with RPTA to conduct this campaign. Other sponsors of the Clean Air Campaign include the Arizona Departments of Transportation and Environmental Quality, MAG, Maricopa County and the Phoenix Chamber of Commerce.

The schedule for planned activities are as follows:

- Ongoing public and media relations program
- TV, radio, and print advertising is placed during the winter high pollution season.
- Clean Air Campaign event workshops will be held in the fall.
- Promotional events are scheduled:

  Rideshare Week-November 1997
  Earth Day activities - April 1998
  Valley Bike Week - Week 1998
  Fresh Air Science Fair - March 1998
  Summer ozone pollution promotion - June - September - 1998
  Telecommute America Campaign - October

- High Pollution Advisory faxes are sent to over 700 Valley employers during the winter and summer high pollution season when it is "forecast" by the County or ADEQ to potentially exceed federal air quality standards. Tips are provided to encourage high levels of participation on these days.

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000. The Clean Air Campaign budget is estimated to be about $350,000 of this total.

69. Paving, Vegetating and Chemically Stabilizing Unpaved Access Points Onto Paved Roads (Especially Adjacent to Construction/Industrial Sites)

1997 ■ City of Avondale indicates that the City Zoning Ordinance requires paving for all off-road parking other than duplex or single-family residential uses and

requires paved parking for all single-family residential and duplex parking areas.

The City Zoning Ordinance requires that all new roads serving multi-family, commercial and industrial development include paving, curbs, and driveways consistent with the municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions.

The Public Works Department requires compliance with Maricopa County dust control requirements as a condition for any City Grading Permit.

Pavement and curbs for existing unpaved roads is conducted through Improvement Districts or the Capital Improvement Program.

The City uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on paved portion of the roadway. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Buckeye indicates that the Town Development Code requires paving for all areas traveled by vehicles. All roads, driveways and parking areas must include paving and curbs in accordance with Town standards. The Town is in the process of a Five Year Street Paving Program (Capital Improvement Program) which includes curbs, gutters and driveway entrances for existing uses. The Town paints edgelines on all new roadways without curbs to ensure vehicles stay on roadway.

The Town's Development Administrator is responsible for this measure. Legal authority is provided by the adopted Town of Buckeye Development Code, adopted by the Town Council per ARS 9-240. The Town Manager is responsible for implementation of the Five Year Street Paving Program (CIP). This measure is already implemented, ongoing. Funding is provided through the Town's General Fund.

1997 ■ Town of Cave Creek indicates that the Town currently has implemented a plan whereby 15 percent per year of the existing dirt roads are surfaced with recycled asphaltic materials and Lignin, a dust control substance. The Town continues to make this a priority and as such has budgeted nearly $580,000 in its Highway User Fund budget.

1997 ■ City of Chandler requires all parking areas and driveways to have a paved surface. This standard is applicable only at the time a property is newly developed or redeveloped. Some of the previously non-conforming areas, especially those which were formerly agricultural, have been eliminated

because they have recently been developed. The City has also allocated funding to pave some unimproved City parking lots.

In addition, the City is surfacing unpaved alleys with asphalt milling material from overlay projects. The City has already surfaced approximately 18 miles to date and plans to surface an additional seven miles in the upcoming year. The City is also increasing its enforcement of parking on unpaved areas of residential properties through its Neighborhood Code Enforcement Division. Implementation will be ongoing as reasonably practicable and economically feasible. Funding is allocated through the annual budget process. Individual City funded construction projects are subject to the competitive bidding process and City Council approval.

1998 ■ City of El Mirage, in 1998, will require all new developers to commit to stop tracking, especially adjacent to construction/industrial sites. The developer is to provide documentation committing to City Policy and Storm Water Pollution Prevention Plan (SWPPP). This measure will be implemented by the City of El Mirage Public Works Department by February 5, 1998. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. Existing City Public Works staff and Inspector at $50.00/hour will be funded by development fees. Routine enforcement will be provided by the City Engineer, under the City's routine enforcement by the City Inspectors. When tracking does occur, violators will provide sweeping, etc., of the streets where tracking occurred.

1997 ■ Town of Gilbert will allow natural vegetation to grow on unpaved shoulders. The Town will continue to require developers to install pavement, curb, gutter, sidewalks, and landscaping as development occurs. Further, the town will continue to evaluate various methods and products available to control dust generation: 1) at access points where unpaved roads meet paved roads; 2) on unpaved shoulders on paved roads; and, 3) on unpaved roads and alleys. The Town will pave all access points where unpaved roads meet paved roads with reclaimed asphalt, and will require paving of those areas during the land development process.
Ongoing implementation. The Town will: 1) continue to identify all areas (shoulders of paved roads) requiring curbing, paving or stabilization; 2) continue to allow natural vegetation to grow on unpaved shoulders to stabilize the soil.

Funding for this measure will come from the Town of Gilbert's Highway User Revenue Fund and be allocated through the annual budget process.

1997 ■ City of Glendale indicates that the City's current Engineering Guidelines on Design Standards for Infrastructure Construction of Site Development and

Infrastructure has a standard for the paving of driveway aprons on arterial streets, when those streets are widened/improved. In progress. The City's current Engineering Guidelines on Design Standards for Site Development and Infrastructure contains a standard for the paving of driveway aprons on arterial streets when those streets are widened/improved. The City Engineer is responsible for the preparation and implementation of the City's Engineering Guidelines on Design Standards for Site Development and Infrastructure. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Goodyear indicates that the City's current Engineering Design Guidelines for Public Works Construction has a standard for the paving of driveway aprons on arterial streets, when those streets are widened/improved. In progress. The City's current Engineering Design Guidelines for Public Works Construction contains a standard for the paving of driveway aprons on arterial streets when those streets are widened/improved. The Public Works Department is responsible for the preparation and implementation of the City's Engineering Design Guidelines for Public Works Construction. Funding for this program is determined in the City's annual budget process.

1997 ■ City of Mesa is committed to continue working with citizens to form special improvement districts to pave unpaved traffic surfaces. In addition, the City of Mesa will work with and encourage other governmental agencies within Maricopa County to have the State law revised to allow the governing body to reject Improvement District protests when the proposed Improvement District is related to air quality. As new residential, commercial or industrial areas are developed paving and curbing is required under City Code 9-6-4 and 9-8-3. The majority of unpaved roads within the City have been dust proofed.

In 1997, the City Council authorized the development of a plan and committed City resources to an increased level of local dust control strategies and enforcement for control of fugitive dust sources associated with earthmoving and construction activities throughout the City. The focus of the expanded program will be control of particulate pollution at the generating source to prevent release onto paved or unpaved access points.

City staff will continue to work on a regional level to develop educational materials and outreach programs to encourage dust control measures for unpaved roads, vacant lots, and unpaved parking lots. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ City of Peoria indicates that the developer is to provide documentation committing to City Policy and the Storm Water Pollution Prevention Plan. This will be implemented by January 5, 1998. City Inspector, $70.00 per hour. This includes all benefits and a vehicle for this person.

1997 ■ City of Phoenix indicates that the City Zoning Ordinance requires paving for all off-road parking other than duplex or single-family residential uses and requires dust free parking for all single-family residential and duplex parking areas.

The City Zoning Ordinance requires that all new roads serving multi-family, commercial, and industrial development include paving, curbs, and driveways consistent with the municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions except those with very low density.

The Development Services Department may require compliance with Maricopa County dust control requirements as a condition for any City Grading Permit. The City also requires a haul permit for transporting excavated materials in excess of prescribed threshold quantities or for extended hauling periods. Requirements for reducing trackout onto City streets are defined and included in the permit.

Pavement and curbs for existing unpaved roads are conducted through Improvement Districts. In 1992, the City reduced the assessment fee for property owners in targeted areas from a maximum of $40 per front foot to $20 per front foot, thus serving as an incentive to pave roads. This program addresses unpaved streets in the central areas of the City where particulate pollution is the highest. In April 1997, the City Council approved a pilot project to further reduce these assessment fees to $10 per front foot. (This project is also discussed in Measure 97-DC-99).

The City uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on pave portion of the roadway. Grading and Drainage Haul Permit Program is in progress. Reduced Improvement District assessment fees were approved in April 1997. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale indicates that the City Zoning Ordinance requires that all new roads serving multi-family, commercial and industrial development include paving, curbs, and driveways consistent with the municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions except those with very low density. Access points

must be paved with asphalt for a certain distance on any unpaved road surface or new construction.

The City of Scottsdale Community Development Department requires compliance with Maricopa County dust control requirements as a condition for any City Grading Permit. The City also requires a haul permit for transporting excavated materials in excess of prescribed threshold quantities or for extended hauling periods. Requirements for reducing trackout onto City streets are included in the permit.

The City uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on paved portion of the roadway.

Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Surprise will apply a dust-proof prevention material on approximately 5.5 miles of unpaved alleys. This work will be scheduled over the next three years. Approximately 100 person hours ($1,400) and $4,250 in materials will be expended per year. Funding for this measure will be from the City's Highway User Revenue Fund (HURF). The General Funds will be used to supplement the HURF Fund on an as needed basis.

1997 ■ City of Tempe Code requires paved roads and parking areas for any new construction within the City. The City also requires all new roads serving subdivisions, multifamily housing, commercial, and industrial development be paved, curbed, and have paved driveways. The City also requires those applying for building permits on developed lots pave their driveways, if not already done.

The City requires a haul permit for transporting excavated materials in excess of prescribed quantities or for extended periods. Construction sites are monitored closely to eliminate carryout mud and dirt from the sites to the city streets. Vacant sites or areas under the City's care, including unpaved alleys, that are known to be dust producers are stabilized routinely with a dust control substance.

City of Tempe streets are nearly 100 percent paved and curbed, with approximately one mile of City streets left to pave. The improvement of the Rio Salado Parkway, between McClintock and Price Road, scheduled for construction in late 1997, will decrease that figure by about half.

The City of Tempe will continue to provide a clean, dust free environment for its citizens and visitor enjoyment. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Tolleson will strengthen the enforcement of an existing ordinance designed to reduce the amount of mud and dirt carryout from unpaved roads and shoulders of paved roads such as those found on construction and/or industrial sites. Ordinance is already in place. In accordance with the City of Tolleson Zoning Ordinance Article VI, Section B.3. entitled Landscape Regulations, the property owner and/or lessee shall install and maintain all paving, vegetating, and chemically stabilize unpaved access points onto paved roads.

1997 ■ Town of Wickenburg indicates that there are only two partial roadways within the Town of Wickenburg that are yet unpaved. The Town is attempting to build up a Capital Improvement Fund from its operation of an electrical distribution system. The Capital Improvement Fund, once available, will be used to pave these roads. This could, however, be two to four years away.

There is no funding available at this time. The Town of Wickenburg is a small town and has limited revenue resources. These resources are prioritized by the Common Council, depending mainly on health, safety and public welfare, in that order. Once the funds are available, or if there are enough Highway User Revenue Funds (HURF), the Common Council will include this measure in its budget.

1997 ■ Arizona Department of Transportation indicates that pursuant to A.R.S. 28-104 ADOT is responsible for the planning, construction, and management of facilities on the State Highway System. Paving turnouts is based on adopted guidelines. A new ADOT Highways Division Policy and Implementation Memoranda addressing TURNOUT PAVING IN PM-10 NONATTAINMENT AREAS became effective February 1, 1995.

This procedure would apply to state highway construction projects within the boundaries of the attached PM-10 Nonattainment Area map when paving operations are in integral part of new construction, reconstruction, and pavement preservation projects.

Pursuant to Arizona Revised Statute 28-108, ADOT adopted "Encroachments in Highway Rights-of-Way (Rule 17-3-702) on July 6, 1981. The rules and regulations established included permit application procedures, permit processing procedures, initial placement, adjustment, relocation, reconstruction, and replacement for use of State Highway rights-

of-way. Access is permitted in accordance with Driveway & Turnout Layouts Standards.

Rule 17-3-702 sets a Landscaping regulation. This identifies the highway roadside as an integral unit of total highway facility and the term "roadside" generally refers to the area between the outer edge of the roadway pavement and the right-of-way boundary, including all unpaved areas within the right-of-way. Roadside Development Landscaping Permit Guidelines are available to applicants upon request.

The regulation, Maintenance Responsibility (Section "J." of Rule 17-3-702), requires the adjacent property owners having access to a state highway to be fully responsible and liable for costs for the maintenance of their driveway keeping that portion in a safe condition for the general public. The portion that the property owners are responsible for is from the highway right-of-way line to the outside edge of the highway shoulder or curbline.

ADOT Controlled Access Roads do not have unpaved access points. Paving unpaved surfaces that adjoin facilities on the State Highway System is an ongoing effort of ADOT in conjunction with pavement preservation and reconstruction projects within our Right-of-Way Section. When a state highway is being reconstructed or resurfaced, ADOT standard operating procedures allow for turnout paving for an entire legal and permitted encroachment from the highway pavement edge to the right-of-way line. Asphaltic concrete pavements are resurfaced approximately every ten years. Paving unpaved adjoining surfaces to the right-of-way is a construction expense paid from the appropriate Federal, State, and local funds.

A new Highways Division Policy and Implementation Memoranda addressing TURNOUT PAVING IN PM-10 NONATTAINMENT AREAS became effective February 1, 1995. As shown in the new policy ADOT will provide a bituminous driving surface within ADOT right-of-way for permitted side roads and turnouts which access the state highway in designated nonattainment areas for Suspended Particulate Matter (PM-10). Attached is a copy of the new ADOT policy on paving turnouts.

For the purposes of describing the Commitment, ADOT, through the Transportation Planning Group Air Quality Planner, will review and collect project information on turnouts to be surfaced within Maricopa County Environmental Services Division for the required annual report for the Environmental Protection Agency. This information will address side roads and turnouts which access a state highway in the designated Maricopa County Nonattainment Area of the State for Suspended Particulate Matter (PM-10).

70. Curbing, Paving or Stabilizing Shoulders on Paved Roads (Includes Painting Stripe on Outside of Travel Lane)

1997 ■ City of Avondale indicates that the City Zoning Ordinance requires paving for all off-road parking other than duplex or single-family residential uses and requires paved parking for all single-family residential and duplex parking areas.

The City Zoning Ordinance requires that all new roads serving multi-family, commercial and industrial development include paving, curbs, and driveways consistent with the municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions.

The Public Works Department requires compliance with Maricopa County dust control requirements as a condition for any City Grading Permit.

Pavement and curbs for existing unpaved roads are conducted through Improvement Districts or the Capital Improvement Program.

The City uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on paved portion of the roadway. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ Town of Buckeye indicates that the Town Development Code requires paving for all areas traveled by vehicles. All roads, driveways and parking areas must include paving and curbs in accordance with Town standards. The Town is in the process of a Five Year Street Paving Program (Capital Improvement Program) which includes curbs, gutters and driveway entrances for existing uses.

The Town's Development Administrator is responsible for this measure. Legal authority is provided by the adopted Town of Buckeye Development Code, adopted by the Town Council per ARS 9-240. The Town Manager is responsible for implementation of the Five Year Street Paving Program (CIP). This measure is already implemented, ongoing. Funding is provided through the Town's General Fund.

1997 ■ Town of Cave Creek indicates that 75 percent of all paved roads in the Town were restriped in 1996 with Painting Stripe on Outside of Travel Lane. The remaining roads without Outside Travel Stripes are scheduled for painting in FY 1998. A new program for stabilizing paved road shoulders with Lignin has been implemented for FY 1998.

1997 ■ City of Chandler currently requires that any newly constructed street include curbing and paving of shoulders. The City will evaluate any newly annexed county roads to determine the appropriateness of striping the outside of the travel lane. Implementation will be ongoing. Funding is allocated through the annual budget process.

1998 ■ City of El Mirage, in 1998, indicates that this measure involves allowing natural vegetation to grow on unpaved shoulders. The City will require developers to install pavement, curb, gutter, sidewalks, and landscaping as development occurs. This measure will be implemented by the City of El Mirage Public Works Department and City Engineer. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. By June 1998, the City will identify all areas (shoulders or paved roads) requiring curbing, paving, stabilization, or striping. Allow natural vegetation to grow on unpaved shoulders and to stabilize the soil, where applicable. Striping will be added and in many cases, has already implemented where no curbing has been provided. Implementation will be part of normal staff work. No additional personnel or funding will be required. Enforcement will be provided by the Public Works Department and the City Engineer.

1997 ■ Town of Gilbert will allow natural vegetation to grow on unpaved shoulders. The Town will continue to require developers to install pavement, curb, gutter, sidewalks, and landscaping as development occurs. Further, the Town will continue to evaluate various methods and products available to control dust generation: 1) at access points where unpaved roads meet paved roads; 2) on unpaved shoulders on paved roads; and, 3) on unpaved roads and alleys.

The Town will pave all access points where unpaved roads meet paved roads with reclaimed asphalt, and will require paving of those areas during the land development process.

Ongoing implementation. The Town will: 1) continue to identify all areas (shoulders of paved road) requiring curbing, paving or stabilization, and 2) continue to allow natural vegetation to grow on unpaved shoulders to stabilize the soil.

Funding for this measure will come from the Town of Gilbert's Highway User Revenue Fund and be allocated through the annual budget process.

1997 ■ City of Glendale currently requires the installation of curbs, gutters, sidewalks, and landscaping when City arterial streets are improved. The City currently requires a painted edge line on outside travel lanes of appropriate arterial streets with unpaved shoulders. In addition, the City currently allows

natural vegetation to grow to stabilize unpaved shoulders, where appropriate. Currently in progress. The City Traffic Engineer is responsible for determining where edge lines are necessary. Funding for this program is determined in the City's annual budget development process.

1997 ■ City of Goodyear currently requires the installation of curbs, gutters, sidewalks, and landscaping when City arterial streets are improved. The City currently requires a painted edge line on outside travel lanes of appropriate arterial streets with unpaved shoulders. Shoulders are repaired as necessary with appropriate material. Currently in progress. The City's Public Works Department is responsible for determining where edge lines are necessary. Funding for this program is determined in the City's annual budget process.

1997 ■ City of Mesa is committed to continue working with citizens to form special improvement districts to pave unpaved traffic surfaces. In addition, the City of Mesa will work with and encourage other governmental agencies within Maricopa County to have the State law revised to allow the governing body to reject Improvement District protests when the proposed Improvement District is related to air quality. As new residential, commercial, or industrial areas are developed, paving and curbing is required under City Code 9-6-4 and 9-8-3. The majority of unpaved roads within the City have been dust proofed.

In 1997, the City of Council authorizes the development of a plan and committed City resources to an increased level of local dust control strategies and enforcement of control of fugitive dust sources associated with earthmoving and construction activities throughout the City. The focus of the expanded program will be control of particulate pollution at the generating source to prevent release onto paved or unpaved access points.

City staff will continue to work on a regional level to develop educational materials and outreach programs to encourage dust control measures for unpaved roads, vacant lots, and unpaved parking lots. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ City of Peoria indicates that this measure will be implemented by the City of Peoria Public Works/Engineering Department and Community Services Department. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. By June 1992, identify all areas (shoulders or paved roads) requiring curbing, paving, stabilization, or striping. Allow natural vegetation to grow on unpaved shoulder and to stabilize the soil, where applicable. Striping will be added and in many cases is already

implemented where no curbing has been provided. For the additional striping it is not a matter of additional personnel or funding because it has already been implemented. However, where additional striping has been installed, it is estimated to be maintained at $64.00 per hour.

1997 ■ City of Phoenix indicates that the City Zoning Ordinance requires paving for all off-road parking other than duplex or single-family residential uses and requires dust free parking for all single-family residential and duplex parking areas.

The City Zoning Ordinance requires that all new roads serving multi-family, commercial, and industrial development include paving, curbs, and driveways consistent with the municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions except those with very low density.

The Development Services Department may require compliance with Maricopa County dust control requirements as a condition for any City Grading Permit. The City also requires a haul permit for transporting excavated materials in excess of prescribed threshold quantities or for extended hauling periods. Requirements for reducing trackout onto City streets are defined and included in the permit.

Pavement and curbs for existing unpaved roads are conducted through Improvement Districts. In 1992, the City reduced the assessment fee for property owners in targeted areas from a maximum of $40 per front foot to $20 per front foot, thus serving as an incentive to pave roads. This program addresses unpaved streets in the central areas of the City where particulate pollution is the highest. In April 1997, the City Council approved a pilot project to further reduce these assessment fees to $10 per front foot. (This project is also discussed in Measure 97-DC-99).

The City uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on paved portion of the roadway. Grading and Drainage Haul Permit Program is in progress. Reduced Improvement District assessment fees were approved in April 1997. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale uses painted edgelines along roadways with unpaved shoulders on arterials and other streets where appropriate to help ensure that vehicles stay on the paved portion of the roadway.

The City Zoning Ordinance requires that all new roads serving multi-family, commercial, and industrial development include paving, curbs, and

driveways consistent with municipal standards. Paving and new roads serving subdivisions are required for all residential subdivisions except those with very low density. Access points must be paved with asphalt for a certain distance on any unpaved road surface for new construction. Existing access points are typically treated with a stabilizer.

The City of Scottsdale Community Development Department requires compliance with Maricopa County dust control requirements as a condition for any City Grading Permit. The City also requires a haul permit for transporting excavated materials in excess of prescribed threshold quantities or for extended hauling periods. Requirements for reducing trackout onto City streets are included in the permit.

Grading and Drainage Haul Permit Program is in progress. Reduced Improvement District assessment fees were approved in April 1997. Funding is allocated through the biennial budget process.

1997 ■ City of Surprise will dust proof approximately five miles of unpaved shoulders on paved roads. Additionally, five miles of unpaved shoulders will be stabilized by the City beginning FY 1998. Developers are improving (paving and curbing) approximately five miles of unimproved streets per year (ongoing). Approximately 200 person hours $2,800 and $4,000 in materials will be expended. Funding for this measure will be from the City's Highway User Revenue Fund (HURF).

1997 ■ City of Tempe Code requires paved roads and parking areas for any new construction within the City. The City also requires all new roads serving subdivisions, multi-family housing, commercial, and industrial development be paved, curbed, and have paved driveways. The City also requires those applying for building permits on developed lots pave their driveways, if not already done.
The City requires a haul permit for transporting excavated materials in excess of prescribed quantities or for extended periods. Construction sites are monitored closely to eliminate carryout mud and dirt from the sites to the city streets. Vacant sites or areas under the City's care, including unpaved alleys, that are known to be dust producers are stabilized routinely with a dust control substance.

City of Tempe streets are nearly 100 percent paved and curbed, with approximately one mile of City streets left to pave. The improvement of Rio Salado Parkway, between McClintock and Price Road, scheduled for construction in late 1997, will decrease that figure by about half.

The City of Tempe will continue to provide a clean, dust free environment for its citizens and visitor enjoyment. Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Tolleson commits to strengthen the enforcement of an existing City Ordinance that requires curb, gutter, and sidewalks on all City rights-of-way within residential, commercial, and industrial developments. Tolleson further commits to implement this measure in newly developed areas, however, action cannot be taken in unincorporated regions. An ordinance is already in place. Public Works Department provides the manpower necessary to carry-out this measures. City of Tolleson General Funds.

1997 ■ Town of Wickenburg indicates that the Town at this time does not have the funds with which to stabilize shoulders on its paved roads. However, most of the routes do not have shoulders but instead have curbs, gutters and sidewalks beyond the street line. We do not anticipate a shoulder stabilization project unless it can be demonstrated that this problem is contributing to the overall air quality problem in Maricopa County, Arizona.

1997 ■ Town of Youngtown indicates that the Town on an annual basis and according to the five-year plan, reconstructs various Town roadways. Included in the reconstruction project is the adding of curbs and gutters to the existing streets. Measure begins with selection of consultant in July 1997 and project completion scheduled for May 1998. Major portion of funding for the street reconstruction project is made available by CDAC ($226,291-FY 1997-1998).

1997 ■ Arizona Department of Transportation indicates that pursuant to A.R.S. 28-104 and ADOT Standard Specifications Section 101.5 "Roadside Development" requires the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching, and the placing of other ground covers. As stated in the Overview of the ADOT Roadside Vegetation Management Program, ADOT shall provide for the prevention and control of soil erosion within the right-of-way and adjacent lands that may be affected by the operation or maintenance of the highway.

The Roadside Vegetation Maintenance Program coordinates activities in such a manner that the safety, appearance, stability, and resource benefits of the ADOT roadways are improved. Specific curb and gutter projects are included in the Five-Year Highway Construction Program as part of new construction or reconstruction, when applicable.

Curbing and paving of shoulders may be included in construction projects. A key component of highway maintenance is vegetation management, which is carried out by maintenance forces.

The ADOT Highway Maintenance Performance Guidelines applicable to stabilizing shoulders of paved roads, other than curbing or paving, reference seeding. This type of seeding is done in more of the rural areas. Seeding in the urban area is currently being done by the contractor as part of the construction process.

For describing the Commitment, ADOT, though the Transportation Planning Group Air Quality Planner, will provide information to Maricopa County Nonattainment Area by researching the project construction plans and the Progress and Final Payment Report for highway project in the Maricopa Nonattainment Area. While the various types of concrete curb and gutter are measured in lineal feet, other landscaping and seeding activities to stabilize the shoulders are measured in various units as cubic yards, acres, or per unit.

71. Frequent Routine Sweeping or Cleaning of Paved Roads

1997 ■ City of Avondale conducts routine sweeping of residential and major streets. The street sweeping schedule will be changed to coordinate sweeping with the uncontained trash pick-up during the 1997-1998 fiscal year. (See Measures 97-DC-99 for additional dust control measures).

The City will continue to consider new street sweeping equipment which may be designed to reduced particulate emissions and/or to increase sweeping efficiency. Implementation is in progress.

1997 ■ Town of Buckeye indicates that the Town will sweep all streets on a routine basis. Public Works Department is already implementing this measure, ongoing. Funding is provided through the Town's General Fund.

1997 ■ Town of Carefree is a semi-rural community with a population of approximately 2300 residents located on the north edge of the Phoenix metropolitan area. The Town of Carefree has a continual program in sweeping paved streets as necessary. This measure will be implemented by the Town of Carefree. Local authority for this action is provided under Section 9-240.3(c) of the Arizona Revised Statutes. The annual cost of sweeping paved streets is approximately $20,000 which is budgeted in the Street Department Maintenance Budget.

1997 ■ Town of Cave Creek indicates that the Town is periodically renting road sweepers to accomplish this task. At present, the Town is only able to sweep the roads twice a year. It is hopeful that in the near future, a sweeper can be purchased so that sweeping can occur on a more frequent basis.

The Town has two water trucks which are used to flush paved roads as needed.

1997 ■ City of Chandler has increased its street sweeping frequency on residential streets to once every 30 days and its arterial streets to once every 14 days. Streets in the downtown area are swept weekly. City Code also requires developers to keep City streets free of construction debris. A refundable street cleanup fee is charged to developers and the City may levy an assessment against this fee to cover the costs of street cleanup. Implementation will be ongoing. One additional FTE was included in the FY 1998 budget, increasing the FTE assigned to sweeping on a full-time basis to five. Funding is allocated through the annual budget process. The Budget for FY 1998 was increased to $400,000.

1997 ■ City of El Mirage currently has contracted this service to a street sweeping company, which provides the services on a quarterly basis. In progress and as needed. The Foreman/Leadman in Department is responsible for the coordination with the company on the sweeping program for the implementation of this measure as determined in the City's annual budgeting process.

1998 The City of El Mirage, in 1998, indicates that all new residential and non-residential developments in El Mirage are required to pave any driveways and to construct standard curbing on adjacent public streets. City policies also dictate the installation of curbing on all public street facilities in conjunction with area improvement districts. Public streets in El Mirage are currently swept on a quarterly basis. In the future, in conjunction with right-of-way improvements in existing development areas, the City will construct asphalt driveway approaches where required and will maintain a monthly sweeping schedule.

This measure will be implemented by the City of El Mirage Public Works Department and City Engineer by July 1, 1998. Legal authority for this action is provided under Section 9-240 of the Arizona Revised Statutes. As development increases, additional sweepers will be added to reduce cycle time of sweeper routes. Currently, funds have been budgeted to sustain the sweeping program and additional funds will be requested in the 1998-99 budget year to increase the service level. This measure does not represent an ordinance, regulation or rule requiring enforcement. Enforcement will be provided by the Public Works Department routine maintenance program.

1997 ■ Town of Fountain Hills agrees to sweep streets on a frequent basis within the Town limits. This measure will be implemented by the Town of Fountain Hills

Street Department. Legal authority for this is provided under ARS Section 9-240- "General Powers of Council". Fountain Hills has an ongoing program of sweeping its streets to keep sand and debris removed from the travel ways, particularly at intersections. Curbs are included in virtually all of the 150 miles of the Town's streets.

The sweeping program is included in the Town's annual budget. This measure does not represent an ordinance, regulation, or rule requiring enforcement. Maintenance of pavement and signage on the affected streets and bikeways will be provided by the Town Streets Department, under the Town's routine maintenance program.

1997 ■ Town of Gilbert regularly requires contractors to take the necessary action to prevent dust nuisance due to construction activities in accordance with the County air pollution control regulations. The Town is continuing to sweep streets in subdivisions once a month to reduce dust generation. The downtown area streets are swept once a week. The town recently purchased two Athey mobile sweepers to help reduce dust generation. In cases where regular street sweeping is insufficient (e.g., after serious floods, material spills, etc.) The Town will "wash down" the affected streets in an appropriate and expeditious manner. The Town will continue to consider purchasing new street sweeping equipment which may be designed to reduce particulate emission and/or to increase sweeping efficiency.

Funding for this measure will come from the Town's Highway User Revenue Funds. General resources will be used to supplement the Highway User Funds, if necessary. In FY 1996-1997, the Town spent $260,000 on the purchase of two Athey mobile sweepers.

1997 ■ City of Glendale indicates that the City currently regularly sweeps its streets using mechanical broom sweepers. The City will evaluate new/emerging technologies in the street sweeping industry, such as vacuum and regenerative sweepers, as significant technological improvements are made.

In progress and as needed. The Field Operations Director is responsible for the City's street sweeping program. Funding for the implementation of this measure is determined in the City's annual budgeting process.

1997 ■ City of Goodyear currently sweeps its streets on a daily basis using a mechanical broom sweeper. The City will evaluate new technologies in the street sweeping industry, such as vacuum and regenerative sweepers, as significant technological improvements are made. In progress as needed. The Public Works Department is responsible for the City's street sweeping

program. Funding for the implementation of this measure is determined in the City's annual budgeting process.

1997 ■ City of Mesa conducts routine periodic sweeping of residential and major arterial streets. The City will continue to evaluate new street sweeping equipment which may reduce particulate emissions and/or increase sweeping efficiency. The City typically will use a water spray in conjunction with a brushing action that has the effect of increasing the efficiency of the sweeping and reduces the entrainment of particulate materials. Implementation will be ongoing. Funding is allocated through the annual and five year capital budget process.

1997 ■ Town of Paradise Valley indicates that the Street Superintendent is in the process of beginning to sweep the streets in sections. Many streets did not get swept in a routine basis. This process is just beginning and will take a year to fully implement. The goal is every street swept every 6 weeks. Currently the streets are swept once every 3 months. Town of Paradise Valley Public Works Department. In process at this time. Equivalent of one employee is utilized. Town of Paradise Valley Annual Budget will be used for funding.

1997 ■ City of Peoria indicates that all new residential and non-residential developments in Peoria are required to pave any driveways and to construct standard curbing on adjacent public street facilities in conjunction with area improvement districts. Public streets in Peoria are currently swept on a monthly basis. In the future, in conjunction with right-of-way improvement in existing developed areas, the City will construct asphalt driveway approaches where required and is focused on trying to maintain a biweekly sweeping schedule. This will be implemented by January 5, 1998. As development increases, additional sweepers will be added to reduce cycle time of sweeper routes. Currently, we have budgeted to sustain our sweeping program and are requesting $271,817 to sustain our sweeping program and are requesting $322,240 in our 1997-1998 budget year to increase our service level.

1997 ■ City of Phoenix conducts routine sweeping of residential and major streets. The street sweeping schedule will be changed to coordinate sweeping with the uncontained trash pick-up during the 1997-1998 fiscal year. (See Measures 97-DC-99 for additional dust control measures.) The City will continue to consider new street sweeping equipment which may be designed to reduced particulate emissions and/or to increase sweeping efficiency.

The City Street Transportation Department is conducting a pilot program to develop equipment to reduce the dust generated from the crack-seal operations. The City will continue to work with equipment manufactures to replace high-pressure crack cleaning blowers with a vacuum system. In 1997, one prototype unit was placed in service and three more units have been ordered. Additional units may be added in the future as the technology is perfected and as older crack-seal equipment is retired. Also see Measure 97-DC-99 for information on additional dust control measures.

Implementation is in progress. Street Crack-Seal Technology Pilot Program began in 1996. Additional equipment is scheduled for delivery in 1997. Funding is allocated through the annual budget process. $656,000 has been allocated in FY 1997-1998 for changes to the street sweeping schedule.

1997 ■ Town of Queen Creek will sweep all curb and gutter streets under the Town's jurisdiction. This will occur four times per year and include an estimated additional twelve lane-mile passes of sweeping each year. It is expected that this program will be implemented no later than January 1, 1998. The Town will assign one person to handle the contract administration and inspection of completed sweeping. The Town will utilize Highway User Revenue Funds to implement this measure.

1997 ■ City of Scottsdale Municipal Services Department, Field Services Division sweeps all curbed miles of residential, commuter and downtown streets at scheduled intervals. Residential streets are swept 18.5 times per year or approximately once every 3 weeks. Commuter streets are swept 52 times per year or once every week. Downtown streets are swept 104 times per year or twice per week. One of the goals of the Field Services Division as stated in the Biennial Budget for fiscal years 1997-1999 is to maintain this schedule.

The City will continue to consider new street sweeping equipment which may be designed to reduced particulate emissions and/or to increase sweeping efficiency, if that equipment is available, reliable and cost efficient.

Implementation is in progress. Funding is allocated through the biennial budget process. There are currently six full-time Motor Sweeper Operators. The cost per curb mile swept for 1996-1997 is $9.16, for 1997-1998 is estimated at $9.43, and for 1998-1999 is estimated $9.71.

1997 ■ City of Surprise will continue to sweep its streets once every ten working days. Heavily traveled arterials adjacent to new construction will be swept more frequently as needed. Ongoing. This measure utilizes one full-time

employee, at an approximate cost of $25,000. Funding for this measure comes from the City's Highway User Revenue Fund (HURF).

1997 ■ City of Tempe routinely sweeps all streets. The streets in the downtown area are flushed after special events. The City of Tempe is committed to maintaining a clean appearance while at the same time working toward the replacement of dust and emissions producing equipment with newer, more environmentally sound equipment as it becomes available and is cost effective to do so.

Implementation is in progress. Funding is allocated through the annual budget process.

1997 ■ City of Tolleson indicates that in accordance with Zoning Ordinance, Article VI the City of Tolleson commits to strengthen its commitment to increase the frequency of street sweeping on 15.3 miles of road within Tolleson corporate limits. Vacuuming in addition to sweeping will further strengthen Tolleson's commitment to this measure. Ordinance already in place. Public Works Department provides the manpower necessary to carryout this measure. City of Tolleson General Funds.

1997 ■ Town of Wickenburg routinely sweeps all paved streets in its limits and will continue to do so. It recently used HURF funds and funds from other sources to purchase a new street sweeper. Ongoing.

One full-time employee from the Public Works Department, with a portion of the funds coming from HURF monies and the approximate cost and employment of the individual operating the machine and the fuel and maintenance used is approximately $30,000 per year.

1997 ■ Town of Youngtown indicates that the Town has an ongoing monthly program of sweeping public streets to keep sand and debris from the travel ways. Currently in operation. Budget for FY 1997-1998 reflects $6,000 designated solely for street sweeping.

1997 ■ Arizona Department of Transportation indicates that pursuant to A.R.S. 28-104, ADOT has the responsibility for maintenance of facilities on the State Highway System. In 1989, street sweeping on State Highways was accomplished through three mechanisms: (1) Under Intergovernmental Agreements with ADOT, cities and towns perform routine sweeping of arterial streets on the State Highway System; (2) ADOT contracts with the private sector to secure regular maintenance of freeway facilities and; (3)

ADOT supplements these efforts with ad hoc sweeping performed by ADOT personnel using state-owned equipment, as needed. The approximate schedule for freeway maintenance was set forth in the terms of the contract between ADOT and the private vendor. The same three mechanisms are currently used to accomplish street sweeping activities.

In 1989, ADOT contracted for the Metro Phoenix Area an annual 26,000 curb miles to be swept in various frequencies. ADOT District Maintenance forces supplemented the sweeping efforts approximately 60 percent of the time. In addition, ADOT contracted for debris snatching or litter removal on interstate roadways at an annual cost of $135,000.

Currently ADOT contracts for the Metro Phoenix Area an annual 30,000 curb miles to be swept in various frequencies. ADOT District Maintenance forces still supplement the sweeping activities, as needed. The current annual contract cost for litter removal is $181,000.

As needed, ADOT maintenance personnel provide supplemental sweeping. The person-hours required will vary depending upon needs. All of the sweeping expenses are included in the ADOT budget for maintenance in District I.

Assigned ADOT maintenance personnel promptly inspect the contractor's work to ascertain the contractor's compliance with contract requirements. Additionally, inspections of streets are routinely done to evaluate and modify, if needed, the schedule for sweeping. The cost of these inspections is also included in the ADOT maintenance budget. ADOT will annually review this measure to ensure the commitment is met.

The ADOT Commitment to this measure is evidenced by the increase in contracted curb miles swept and the increased commitment to litter removal. Roadway maintenance resources and activities will have to be constantly adjusted as the number of roadway lane-miles increase in the District I area.

For the purposes of describing the Commitment the additional roadway lane-miles that are contracted to be swept would be the reporting unit. ADOT, through the Transportation Planning Group Air Quality Planner, will review the measure and provide information to the Maricopa County Environmental Services Division for the required annual report to the Environmental Protection Agency.

PART 3: ADDITIONAL COMMITMENTS FOR MEASURES NOT ON THE SUGGESTED LIST

72. Encouragement of Vanpooling

1997 ■ Regional Public Transportation Authority indicates that this measure involves assisting employers in the formation of new vanpools. Efforts will be targeted at employers with sites affected by the Maricopa County Trip Reduction Program (MCTRP) and the general public through the Regional Ridesharing Program. Currently 121 vanpools are operating with about 1085 riders. This represents a 270 percent increase from 33 vanpools since RPTA's last air quality commitment.

The Regional Public Transportation Authority as the regional transit agency for Maricopa County (A.R.S. 48-5101) provides these services to improve mobility and air quality. The schedule for promotional activities are as follows:

- Vanpool presentations to employers upon request, estimated one per month.
- Provide vanpool collateral material to all interested parties. New material is being developed in 1997.
- Provide vanpool matching on a daily basis.
- Conduct vanpool group formation meetings with potential groups (about 2-5 per month) at request of employer.
- RPTA staff will assist employers in promoting vanpools and will encourage employers to provide subsidies to their employees.

RPTA commits one full-time professional staff to promote vanpooling. RPTA has budgeted $680,000 for the vanpool services contract in 1997-1998 which will accommodate 155 vanpools by the year end. Funding for capital expenses will be made available to RPTA through a Federal Transit Administration Section 9 grant and local match. Seventy percent are FTA Section 9 funds and 30 percent are local funds. Passenger fares account for 100 percent of operating costs.

73. Trip Reduction Program

1997 ■ Regional Public Transportation Authority indicates that the RPTA provides formal trainings, one-on-one assistance, facilities Transportation Management Associations (TMA), and provides informational materials to over 1,250 employers in Maricopa County with 50 or more employees at a site. The Trip Reduction Program affects approximately 580,000 employees

and students at 2,500 sites countywide. The Regional Public Transportation Authority is on contract with Maricopa County to provide services to employers affected in the Trip Reduction Program under A.R.S. 49-581 through 49-593.

The schedule for planned promotional activities are as follows:

- Employer trainings (attended by 20-60 employers a month include: Introduction to TRP, Plan Writing Workshop, Marketing TRP, Telecommuting, Compressed work week programs).
- Employer Transportation Fairs based on employer request.
- Fourteen Transportation Management Associations (TMA's) periodic meetings.
- Over 400 employer contacts made monthly.

Portions of up to fourteen professional staff (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000 of which $819,000 is specific to the Trip Reduction Program. Maricopa County contracts with RPTA to provide TRP support services.

74. Park and Ride Lots

1997 ■ Regional Public Transportation Authority indicates that the RPTA works with member agencies to promote and expand Park and Ride lots as a means to encourage ridesharing and the use of transit. As of December 1996, sixty (60) Park and Ride lots and four (4) transit centers provided 2,556 parking spaces throughout the region. Currently, two new permanent park and ride facilities are being developed. These facilities will be located near 32nd Street and SR 51 (Squaw Peak Highway) and Bell Road and I-17 (Black Canyon Freeway).

The RPTA will continue to work with member jurisdictions, private entities, and employers in the development, design, and implementation of new Park and Ride facilities in locations where they are needed. Park and Ride activities are in the ongoing annual budgets of the RPTA and its member jurisdictions.

75. Encouragement of Telecommuting, Teleworking and Teleconferencing

1997 ■ Regional Public Transportation Authority indicates that the RPTA encourages the use of telecommuting and telecommunications to replace

motor vehicle trips such as working at home or remote work centers close to home. RPTA efforts are targeted largely at the 1,250 employers with about 580,000 employees and/or students. A *Step-By-Step* telecommuting training class is provided to employers planning to implement a telecommuting program. A "how to" implement guidebook is provide to those attending. On-site assistance to employers is also available. RPTA pro-actively seeks out employers with an interest and gives management briefings and follow up consultation until their programs are up and running. RPTA maintains an Internet web site to include the following telecommuting information and materials:

Telecommuting Preview w/FAQs
Telecommuting Fact Sheets
Sample Telecommuting Policies
Research Instruments
Training Schedule
Sample Management Presentations
Sample Agreement
Telecommuting Research Projects

RPTA participates in an in-house formal telecommuting program. In 1996, 15 of RPTA's 25 employees participated as telecommuters. RPTA staff also participates in the Arizona Telecommuting Advisory Council (Chapter member of TAC): The International Telework Association, which encourages and assists Arizona employers in developing and implementing telecommuting programs.

The schedule for planned activities are as follows:

- MCTRP telecommuting trainings are given at least once monthly.
- On an as needed basis, assist employers with all stages of implementation for telecommuting programs including management briefings.
- Participate monthly in AzTAC meetings for interagency cooperation.
- RPTA's telecommuting program is ongoing.
- Promote during Telecommute America Week, October 1997 (national campaign)

Portions of up to fourteen professional (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

76. Promotion of High Occupancy Vehicle Lanes and By-Pass Ramps

1997 ■ Regional Public Transportation Authority indicates that as new facilities open, RPTA will coordinate the promotion of rideshare activities. Efforts will be targeted at 1,250 employers representing over 500,000 employees and students affected by the Maricopa County Trip Reduction Program (MCTRP) and the general public through the Clean Air Campaign (CAC).

The Regional Public Transportation Authority as the regional transit agency for Maricopa County (A.R.S. 48-5101) provides these services to improve mobility and air quality. The schedule for planned promotional activities are as follows:

- Employers' Transportation Fairs based on employers request.
- Fourteen Transportation Management Associations periodic meetings as appropriate.
- Mailings to employers prior to new HOV lane segment opening or expansion.

Portions of up to fourteen professional (10 RPTA and 4 contract staff) will spend part of their time providing this information to the public and employers through the above specified activities. This measure is funded by a portion of the total budget for the Regional Ridesharing Program, TRP (RPTA) and CAC programs which is $1,248,000.

77. Additional Dust Control Measures

1997 ■ City of Phoenix indicates that in the Fall of 1996, the City of Phoenix considered options for reducing particulates in the area near 19th Avenue and Lower Buckeye Road where PM-10 levels have been the highest. The following programs were approved for implementation and have been included in the Preliminary 1997-1998 budget.

Estimated Budget	Program
$500,000	One year pilot program to offer reduced fees/assessment to property owners who form improvement districts to pay for paving unpaved roads. Funding for this measure was approved on April 15, 1997. (Also included in Measure 97-DC-3).
$300,000	Pave and stabilize unpaved shoulders and streets.
$733,000	Install dust controls at landfills: Pavement and a sprinkler system for the mulch processing area at the 27th Avenue Landfill; increased frequency of sweeping at the Skunk Creek and 27th Avenue Landfill; asphalt millings on service roads at the 19th Avenue and 27th Avenue Landfills', and a water truck and tower for the Skunk Creek Landfill.
$656,000	Increase the frequency of residential street sweeping to match the uncontained trash pick-up schedule.

Also, refer to City Council Resolution 18893, April 9, 1997, regarding the City's participation in the Regional Dust Control Program to foster interagency cooperation to reduce particulate pollution. Programs are scheduled to begin implementation during 1997-1998 and 1998-1999 fiscal years. Approximately $2,189,000 has been allocated as noted above. Future funding is allocated through the annual budget process.

1997 City of Phoenix, in 1997, indicates that Resolution #18949, approved by the Phoenix City Council on July 2, 1997, includes measures which the City of Phoenix intends to implement to address particulate emissions. The measures summarized below were defined in that Resolution.

In the Fall of 1996, the City Phoenix considered options of reducing particulates in the area near 19th Avenue and Lower Buckeye Road where PM-10 levels have been the highest. Based on that effort, the City allocated funding for paving and stabilizing unpaved roads and shoulders, dust control at the landfills and changes to the street sweeping schedule (Resolution #18949, Measure 97-DC-99).

Resolution #18949 includes the purchase of four innovative crack seal systems designed specifically for the City of Phoenix. These systems replace the high pressure blowers with a vacuum system to clean street cracks prior to sealing. The Resolution also includes commitments to continue to monitor the development of PM-10 efficient street sweepers. (Resolution #18949, Measure 97-DC-5).

In addition, the City of Phoenix will continue to work with the Arizona Department of Environmental Quality, Maricopa County, the Environmental Protection Agency and City Departments to identify the most cost effective programs to reduce particulate emissions. The primary focus of this study will continue to be the area in Central Phoenix near the Salt River where particulate levels are traditionally higher. The City will continue to work with Maricopa County and ADEQ to evaluate the effectiveness and environmental impacts of chemical dust suppressants for various applications.

The implementing City Departments include the City of Phoenix, Office of Environmental Programs and other various City Departments. The authority for implementation includes: Arizona Constitution, Article 13, Section 2; Phoenix Charter, Chapter 4, Section 2: Council Powers Enumerated; Phoenix City Code, Chapter 2, General Powers, Rights, and Liabilities. Continued review of options to reduce particulate emissions is currently underway. Funding is allocated through the annual budget process.

1997 ■ City of Scottsdale City Council passed Resolution #4752 on March 31, 1997 entitled "Air Pollution from Earth Moving Activities - Cooperation with Maricopa County". The resolution states the City's intent to work cooperatively with Maricopa County to control air pollution from earth moving activities.

The City of Scottsdale Community Development Department, Inspection Services Division tracks the number of citizen initiated dust complaint responses. One of the performance indicator goals of Inspection Services as stated in the Biennial Budget for fiscal years 1997-1999, is to achieve voluntary compliance of identified code violations within 30 days or less. Compliance with fugitive dust control by this means supplements Maricopa County Environmental Services' Rule 310 "Fugitive Dust" enforcement provisions.

Implementation is in progress. Funding is allocated through the biennial budget process.

1997 ■ City of Tempe, in 1997, indicates that earlier this year, construction began on the Rio Salado Development, which will ultimately improve approximately 4.5 miles of the dry Salt River bed and adjacent properties. Included in this project is the construction of a two mile long lake, which is due to be completed in 1999. The Salt River and the properties adjoining its banks constitute the largest unimproved portion of land remaining within Tempe.

Approximately seven percent of Tempe's land area remains to be developed. A strong economy and desire of businesses and residents to work and live

in the city ensures that the few remaining undeveloped parcels of land will soon be improved according to strict zoning and development standards.

1998 City of Tempe, in 1998, indicates that last year, construction began on the Rio Salado Development, which will ultimately improve the dry Salt River bed and adjacent properties in Tempe. Included in this project is the construction of a two mile long lake which is due to be completed in 1999.

Less than seven percent of Tempe's land area remains to be developed. A strong economy and desire of businesses and residents to work and live in the city ensures that the few remaining undeveloped parcels of land will soon be improved according to strict zoning and development standards.

The implementing City Departments include the: Development Services Department; Economic Development Department; Public Works Department. The authority for implementation includes: A.R.S., Section 9-240, General Powers of Council; Code of Tempe, Arizona. Implementation is in progress. Funding is provided through the annual budget process.

TRACKING PLAN IMPLEMENTATION

The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis. In order to accurately monitor or track plan implementation, the Maricopa County Environmental Services Department will be requesting that the implementing agencies and jurisdictions complete the annual progress report form contained in Appendix C, Exhibit 1. The Environmental Services Department will then review and summarize this information, prepare an implementation status report, and then present the report to the MAG Air Quality Policy Committee. The Maricopa County Environmental Services Department will also continue to have the responsibility for conducting ambient air quality monitoring. The most recent progress report entitled, MAG Air Quality Plan 1996 Annual Progress Report (July 1998) is provided in Appendix B, Exhibit 2.

Supplemental to the tracking efforts of the Maricopa County Environmental Services Department, the Maricopa Association of Governments publishes regional traffic flow maps and calculates regional vehicle miles of travel from these flow maps. MAG also conducts vehicle occupancy studies and performs special traffic volume and speed studies, as needed. Phoenix Public Transit continuously monitors transit ridership and summarizes daily ridership for each month. The Regional Public Transportation Authority will also be collecting transit and carpooling ridership information. The Arizona Department of Environmental Quality continuously monitors the number of vehicles inspected in the Vehicle Inspection Maintenance Program, the number of vehicles failing the test, and the improvement in tail pipe emissions after failed vehicles are repaired.

In addition, the MAG Air Quality Technical Advisory Committee will review the implementation report prepared by the Maricopa County Environmental Services Department. The committees will also review the air quality monitoring data on an annual basis to assist in tracking air quality improvement over time.

ASSURANCES THAT THE STATE HAS THE AUTHORITY TO IMPLEMENT THE MEASURES IN THE PLAN

In order to comply with Section 110(a)(2)(E) of the Clean Air Act, a State law was passed in 1992 which provides an approach for assurances that State and local committed measures will be adequately implemented (A.R.S. Section 49-406 I. and J.). If any person (includes State, County, local governments, regional agencies, and other entities) fails to implement a committed measure, the County would file an action in Superior Court to have the Court order that the measure be implemented. Likewise, the Director of the Arizona Department of Environmental Quality will backstop the County if it fails to implement a committed measure or if the County fails to backstop the local governments and regional agencies (see Appendix C, Exhibit 2).

Regarding committed measures, A.R.S. Section 49-406 G. (passed by the Legislature in 1992) requires that each agency which commits to implement any control measure contained in the State Implementation Plan must describe the commitment in a resolution. The resolution must be adopted by the appropriate governing body of the agency. State law also requires the entity to specify the following information in the resolutions: (1) its authority for implementing the limitation or measure as provided in statute, ordinance, or rule; (2) a program for the enforcement of the limitation or measure; and (3) the level of personnel and funding allocated to the implementation of the measure.

As noted in the MAG regional air quality plans, the action taken by the MAG Regional Council to approve the Suggested Measures and Adopted Plan Measures does not commit each jurisdiction to implement those measures. As indicated in the resolutions and commitments, each jurisdiction determines which measures are reasonably available for implementation by that jurisdiction.

APPENDIX M, Exhibit 2:

Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area, Chapter V of Technical Support Document (TSD): Evaluation of Committed Control Measures.

V. EVALUATION OF COMMITTED CONTROL MEASURES

A description of the committed air quality measures is provided below. The sources of these measures include H.B. 2307, H.B. 2237, H.B. 2254, H.B. 2347, S.B. 1002, S.B. 1269, S.B. 1427, and commitments from the Arizona Department of Transportation, Maricopa County, as well as cities and towns. The first group of measures includes those measures which were used for numeric credit. The modeling approach for the measures is also summarized below, with more detailed descriptions presented in Appendix IV, Exhibit 1. The second group of measures includes those measures that were used as contingency measures. Detailed descriptions of the modeling approaches for the contingency measures are presented in Appendix IV, Exhibit 2. The third group of measures includes additional measures for which commitments were received, but which were not used for numeric credit. The impacts of these measures were not readily quantifiable and no credit was taken for the associated reductions. However, the measures clearly represent additional efforts by the region to reduce emissions and improve air quality.

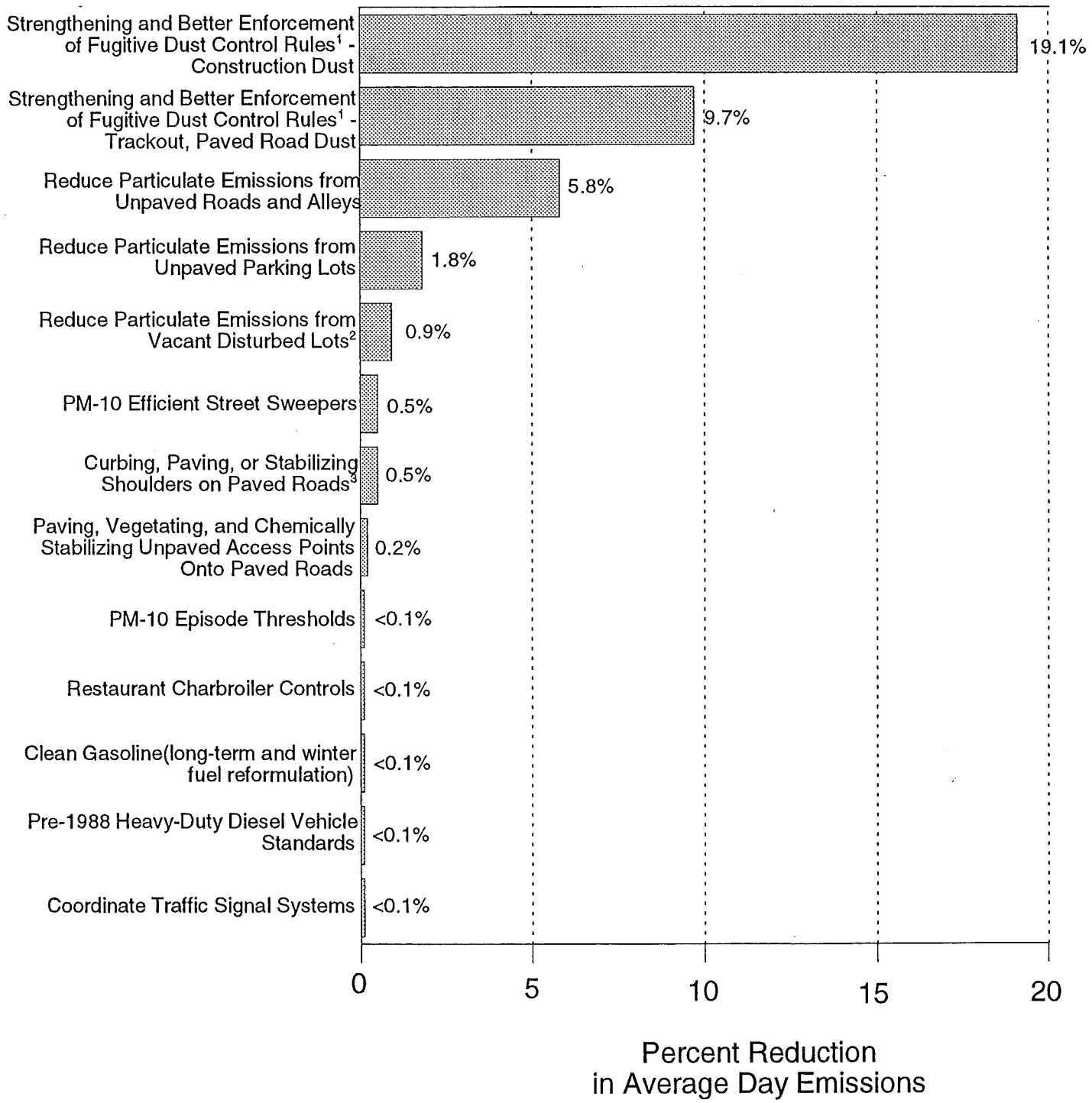
The general approaches used to model the emissions reductions from the individual measures are the same as those used in the evaluation of suggested measures, described in Chapter IV of this document.

Estimated emission reductions are provided below the description of each measure quantified under item A. Modeling Methodology. The reductions reflect average annual day conditions and are PM-10 reductions from the base case emissions inventory total of 210 metric tons. Estimated emission reductions are provided in metric tons reduced and as a percent reduction from the base case inventory. Measures which were not modeled or whose benefit results in a redistribution rather than reduction of emissions have no emission reduction estimate provided. The percent reduction in total PM-10 emissions has been included in bar chart format as Figure V-1 and Figure V-2. Please refer to Chapter VI for the evaluation of the committed measures in combination for the attainment demonstration.

In general, the control measures quantified for numeric credit have been reformatted at the request of EPA. It is important to note that the modeling methodology describes the procedures and assumptions for determining the emission reduction credit for each measure. In addition, both the tonnage reduction and percent reduction are provided for each measure quantified. A table summarizing the tonnage reduction and percent reduction is provided at the end of each group of measures.

FIGURE V-1

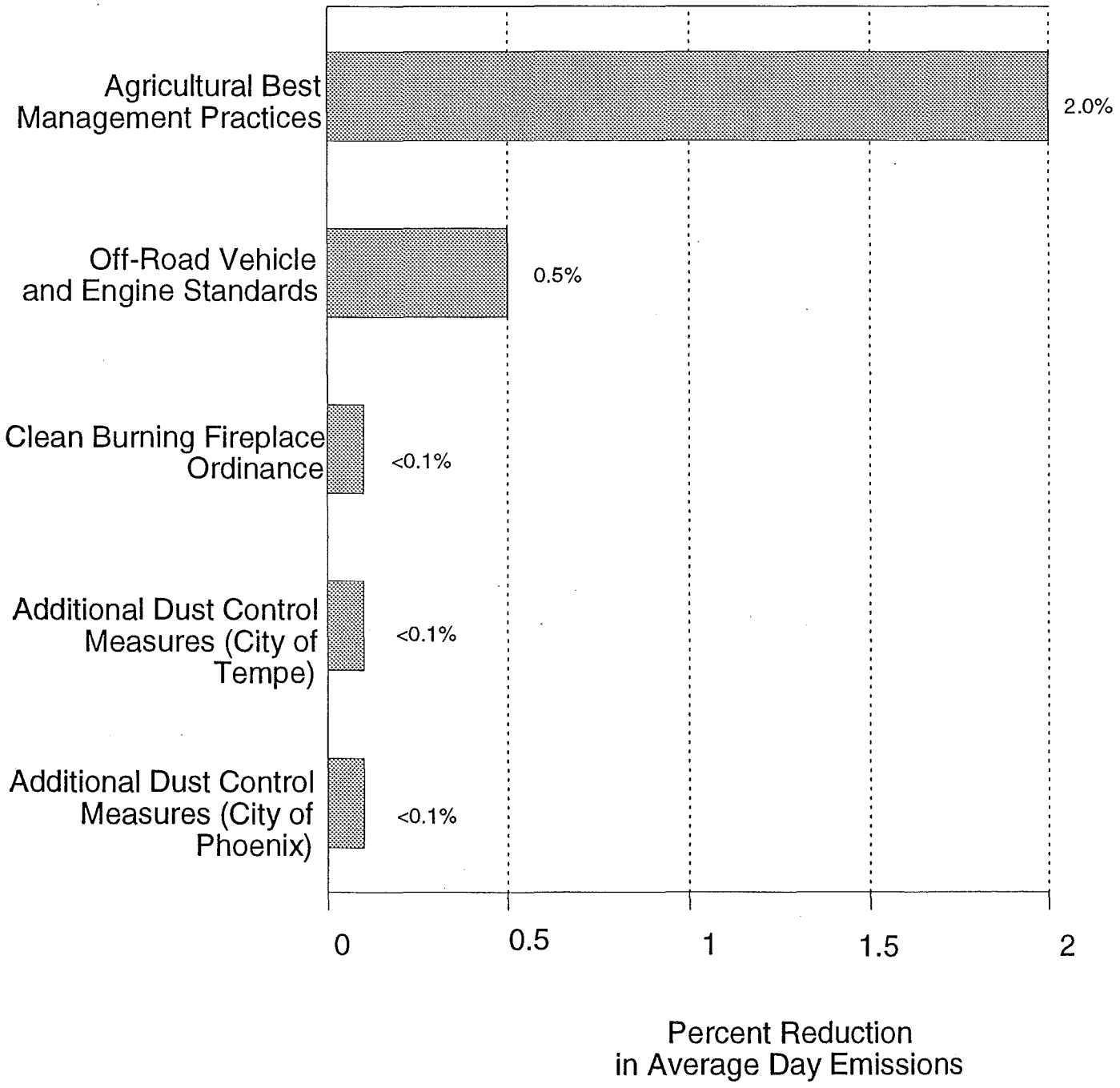
2006 PM-10 Emission Reductions From Committed Control Measures



[1]In addition, the emission reduction includes Dust Control Plans for Construction/Land Clearing and Industrial Sites
[2]In addition, the emission reduction includes Dust Abatement and Management Plan for State Lands
[3]In addition, the emission reduction includes Reduce Particulate Emissions from Unpaved Shoulders on Targeted Arterials

FIGURE V-2

2006 PM-10 Emission Reductions From Committed Contingency Measures



MEASURES USED FOR NUMERIC CREDIT

Modeling Approaches for Individual Measures

1. Strengthening and Better Enforcement of Fugitive Dust Control Rules

Revised 1999 Commitment: It is important to note that the revised commitment supercedes all previous commitments identified in the MAG 1997 and 1999 Serious Area Particulate Plans for PM-10.

Maricopa County indicates that this measure involves achieving improved compliance with existing air pollution rules through the provision of additional inspection and enforcement personnel. In addition, it involves evaluating the effectiveness of rules and improve clarity.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Implementation Schedule: Implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development and performance measures. Specific commitments are described below: staffing under the caption, "Level of Personnel and Funding", the enforcement plan commitments are described under the caption, "Enforcement Program", and performance measures are described under the caption, "Monitoring Program".

Public Outreach/Education:

August 1998	Began offering Dust Control Training Course at Paradise Valley Community College
January 1, 1999	Earth Moving Permit Application Forms, Dust Control Plan Forms and "Pollution Prevention Guide for Construction" available on Web page

January - September 1999	Coordinated with EPA on notifications to vacant lot owners, unpaved parking lot owners, and cities and towns
December 1999 - January 2000	Train inspection staff on case development
February 2000	Complete staff training manual containing checklists for documentation of important observations for citations. The checklists will include records review and describe appropriate actions regarding recordkeeping.
January - March 2000	Complete draft manual for government construction oversight - Initial project due from ASU sponsored by the partnership between MCESD, ADOT, MCDOT, ASU and private industry.
March 2000	Complete staff training on revised rule test methods.
November 2000	Meet with city staff and train city staff to prepare inspection reports and notices of violations based on MCESD staff training manual.

<u>Increase Inspection Frequency Part I--Sources Not Requiring a Permit:</u>

June 1999	Board adopted Rule 310.01 that addressed vacant lots, unpaved parking lots and public unpaved roads.
April 2000	Develop inspection priorities for vacant lot and unpaved parking lot inspections considering lot size and number of sources. Larger lots will be inspected first and smaller lots in succeeding years. Department resources will be directed initially to areas that lack municipal programs.
January 2000	Department obtains copies of local government plans developed pursuant to

	A.R.S. Section 9-500.04 or 49-474.01 to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials.
Annually thereafter	Review reports filed on those plans

Inspection Frequency Part II--Sources Requiring Permits:

June 1997	Scheduled weekend inspections randomly at least once a month.
July 1999	Proactively inspect sites larger than 10 acres 3 to 6 times per year. Proactively inspect sites less than 10 acres once within 30 days of project start date listed on the permit application form.
January 2000	Develop inspection priorities for permitted sources
March 2000	Revise Standard Operating Procedure and checklists for fugitive dust inspections to be consistent with revised rules.
March 2000	Provide a shortened complaint response time with a goal of 8 hours for high priority complaints. Maintain the current goal of 24 hours for all others.
September 2000	Conduct mid-year review of program to evaluate its progress and future needs.
September - January 2001	Draft Fugitive Dust Operating Plan to track progress and identify future needs.
March 2001	Review program to evaluate its effectiveness and potential future needs.

Evaluate and Revise Rule 310:

December 1999 - February 2000	Revise earth moving application forms and dust control plans to be consistent with the revised rule and to improve program effectiveness.

December 1999 - July 2001	Research and develop a standard(s) and test method(s) for earth moving sources, considering field research sponsored by EPA, designed to be enforceable and meet BACM requirements as to stringency and the number of sources that it applies to. If research reveals problems with the existing opacity standard's enforceability, feasibility or stringency for some or all earthmoving operations, revise rule by June-September 2001 to modify the existing opacity test method to address the problems as warranted and adopt a new standard(s) and test method(s) to deal with any problems that cannot be addressed by modifying the opacity test method.
January 2000 - July 2001	Research, develop and incorporate additional requirement for dust suppression practices/equipment into dust control plans and/or Rule 310 by June - September 2001.
June 2000 - June 2001	Revise the sample daily recordkeeping logs for new and renewed Rule 310 permits to be consistent with rule revisions and to provide sufficient detail documenting the implementation of dust control measures required by Rule 310 and contained in the dust control plan. Distribute sample log sheets with issued permits and conduct outreach to sources by June 2000.
January - February 2001	Draft rule revisions, if necessary
March - May 2001	Workshop draft rule, if rule revisions are necessary
June - September 2001	Board consideration of rule revision, if necessary

Level of Personnel and Funding:

Manpower: In 1998, the Department moved three additional inspectors and an enforcement officer from other positions to work proactively and directly on the earth-moving program. As a result of a fee increase adopted by the Board on August 19, 1998, these positions will be permanently funded. In addition, the increase allowed the Department to add another inspector spring 1999 and three additional inspectors, a coordinator, an aide and an enforcement officer during the current fiscal year. By the end of January 2000, these additions will increase personnel working directly and proactively on the program to eight inspectors, one coordinator, one supervisor, an aide and two enforcement officers.

The Department is seeking approval to hire an additional attorney in the County Attorney's Office to expedite civil litigation and to assist with prosecuting Class One Misdemeanor cases by April 2000. Upon approval of this item, the funding will be available to initiate the hiring process through the County Attorney's Office. The Department will also provide an additional FTE to the Small Business Environmental Assistance Program to assist smaller builders and construction companies, and to help develop and implement additional education programs for this industry group. The Department also has 19 inspectors, aides, engineers, and supervisors who are available to monitor compliance at previously permitted facilities, perform field observations and respond to complaints as needed.

Funding: Maricopa County Environmental Service Department's annual revenue for the air quality program is anticipated to be approximately $3.85 million. The annual earth moving permit fee revenue is anticipated to be approximately $1,123,000. This represents an increase of $772,000 over existing program revenue.

Enforcement Program: These requirements are administered through a visual inspection program and/or a permit program which includes review of permit, inspection of facilities, performance of compliance test methods and review of records and activities. The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. The actual process is further described in the Department's Air Enforcement Policy.

February 2000	Draft revised enforcement policy that includes: • guidelines for initiating various enforcement actions • guidelines for reinspection • defines the timely and appropriate action by laying out guidelines for which type of violation is appropriate for specific enforcement actions and

for the timeframes for escalating enforcement actions when appropriate
- identify high priority violations
- guidelines for when to seek penalties reflecting the economic benefit of non-compliance, if feasible
- guidelines for seeking and determining higher penalties, when appropriate, for repeat violations of the same nature
- guidelines for inspectors to handle predetermined citation category violations from observance of a violation to citation delivery to justice court

February 2000	Draft checklists for training manual for field staff to ensure that observations are documented that are important to make the citation program successful.
April 2000	Finalize revised enforcement policy

Monitoring Program: The Department will track the number of inspections, number and type of enforcement actions, amount of penalties assessed, amount of penalties collected, compliance with the 24-hour and annual PM-10 standard and number of educational opportunities provided. In 2003-2004, the Department will perform a rule effectiveness study to evaluate this program.

A. Modeling Methodology

PM-10: The effect of Rule 310 on general construction emissions, those resulting from active construction processes, is based on an assumed compliance rate of 80 percent (see Appendix IV, Exhibit 3 - Maricopa County Draft Fugitive Dust Operating Plan) and the effectiveness reported in the ADEQ microscale plan for earth moving (water to the depth of cut). The emission factor used to calculate construction emissions in the inventory is a composite emission factor based on the activities occurring in a typical construction project.

It was assumed that PM-10 emissions resulting from construction activities are 72 percent controlled in 2006. Because the base case emissions were assumed to be 18 percent controlled, raising the control to 72 percent for 2006 will provide 66 percent control of the base case emissions for 2006.

It was assumed that methods used to remove and or control trackout from construction sites resulted in 72 percent control in 2006. Because the base case emissions were assumed to be 18 percent controlled, raising the control

to 72 percent for 2006 will provide 66 percent control of the base case emissions for 2006.

Assumptions related to the control of windblown emissions from construction sites were revised to be consistent with the assumptions related to control of construction-activity generated fugitive dust. It was assumed that construction sites on the regional scale used the following control measures equally: wind fences, chemical stabilizers, gravel, and watering. It was assumed that windblown emissions from construction sites were 70 percent controlled in 2006. Because the base case emissions were assumed to be 20 percent controlled, raising the control to 70 percent for 2006 will provide 62.4 percent control of the base case emissions for 2006.

The acreage of construction activity that was used to estimate total construction emissions in the modeling inventory was based on the permitted acres of construction. Therefore, only emissions from permitted construction activities appear in the inventory and a rule penetration of 100 percent is appropriate for Rule 310 with regard to construction activities.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.3415 to fugitive construction dust, residential (ASC2311010000) and commercial (ASC2311020000). A /PROJECT AMS/ packet applied a factor of 0.3415 to trackout (ASC2311000070). A /PROJECT AMS/ packet applied a factor of 0.376 to windblown construction dust (ASC2311000100).

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

<table>
<tr><td rowspan="2">Pollutant</td><td colspan="3">Estimated Reduction in Emissions in the Year 2006</td></tr>
<tr><td colspan="2">Metric Tons Per Day</td><td>Percent</td></tr>
<tr><td rowspan="3">PM-10</td><td>Fugitive 36.7</td><td rowspan="3">60.6</td><td rowspan="3">28.8</td></tr>
<tr><td>Windblown 3.5</td></tr>
<tr><td>Trackout 20.4</td></tr>
<tr><td>NO_x</td><td colspan="2">Not Modeled</td><td>Not Modeled</td></tr>
<tr><td>SO_x</td><td colspan="2">Not Modeled</td><td>Not Modeled</td></tr>
</table>

B. Enforceable Commitment

December 1999 - July 2001	Research and develop a standard(s) and test method(s) for earth moving sources, considering field research sponsored by EPA, designed to be enforceable and meet BACM requirements as to

		stringency and the number of sources that it applies to. If research reveals problems with the existing opacity standard's enforceability, feasibility or stringency for some or all earthmoving operations, revise rule by June - September 2001 to modify the existing opacity test method to address the problems as warranted and adopt a new standard(s) and test method(s) to deal with any problems that cannot be addressed by modifying the opacity test method.
	January 2000 - July 2001	Research, develop and incorporate additional requirement for dust suppression practices/equipment into dust control plans and/or Rule 310 by June - September 2001.
	April 2000	Finalize revised enforcement policy

C. Legal Authority

- A.R.S. 49-479
- A.R.S. 49-480
- A.R.S. 49-473
- A.R.S. 49-471
- A.R.S. 49-502, 49-511, 49-512 and 49-513.

D. Implementing Agency

Maricopa County

E. Schedule and Resources

Maricopa County Environmental Service Department's annual revenue for the air quality program is anticipated to be approximately $3.85 million. The annual earth moving permit fee revenue is anticipated to be approximately $1,123,000. This represents an increase of $772,000 over existing program revenue.

F. Monitoring and Tracking Program

- These requirements are administered through a visual inspection program and/or a permit program which includes review of the permit,

inspection of facilities, performance of compliance test method and review of records and activities.

- The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. The actual process is further described in the Department's Air Enforcement Policy.
- The Department will track the number of violations, other enforcement options and the amount of penalties for Rule 310 violations.
- In 2003-2004, the Department will perform a rule effectiveness study to evaluate this program.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

2. Dust Control Plans for Construction/Land Clearing and Industrial Sites (Including Active Landfills), With Elements Addressing Trackout Prevention, Site and Material Maintenance, Construction Staging, and High Wind Operating Restrictions

Maricopa County indicates that this measure involves requiring dust control plans for construction, demolition, land clearing, and industrial projects. Dust control plans are an element of Maricopa County's fugitive dust program described in the measure, Strengthening and Better Enforcement of Fugitive Dust Control Rules. See that measure for descriptions of the program and its legal authority. Credit for the fugitive dust program including dust control plans will be taken under Measure 1. Strengthening and Better Enforcement of Fugitive Dust Control Rules.

3. Reduce Particulate Emissions from Unpaved Roads and Alleys

Arizona Legislature Commitment: The Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans are required to address performance goals, criteria for targeting the roads, alleys and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01). In accordance with S.B. 1427, 22 local governments will be required to develop and implement these plans.

Local Government Commitments: Nineteen cities and towns and Maricopa County have submitted commitments to reduce particulate emissions from unpaved roads and alleys. Eleven jurisdictions will pave, gravel, or stabilize more than 121 miles of unpaved roads and alleys by June 10, 2000. In addition,

Maricopa County will pave at least 60 miles of existing County "courtesy grade" roads > 150 ADT by September 2003. Ten jurisdictions require roads serving new multi-family, commercial, and industrial development to be paved. Nine jurisdictions require roads serving new residential development to be paved. Nine jurisdictions have also paved or graveled 107.4 miles of unpaved roads and alleys since 1994. For alleys, some jurisdictions will require all new alleys to be surfaced with gravel or asphalt, set a 15 mile per hour speed limit in all alleys, and will evaluate and prioritize alleys with high average daily trips for potential abandonment or dust control. Other jurisdictions stabilize unpaved alleys with gravel or asphalt.

Maricopa County Rule 310 Commitment: Maricopa County (Revised 1999 Commitment) indicates that the measure, Strengthening and Better Enforcement of Fugitive Dust Control Rules, involves achieving improved compliance with existing air pollution rules through the provision of additional inspection and enforcement personnel. The fugitive dust control rule, Maricopa County Rule 310.01, addresses the reduction of PM-10 emissions from unpaved roads.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Implementation Schedule: Implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development and performance measures. Specific commitments are described under Measure 1. Strengthening and Better enforcement of Fugitive Dust Control Rules; excerpts pertaining to unpaved roads and alleys are reiterated below.

Increase Inspection Frequency Part I--Sources Not Requiring a Permit:

June 1999	Board adopted Rule 310.01 that addressed vacant lots, unpaved parking lots and public unpaved roads.

January 2000	Department obtains copies of local government plans developed pursuant to A.R.S. Section 9-500.04 or 49-474.01 to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials.
Annually thereafter	Review reports filed on those plans

A. Modeling Methodology

PM-10: This measure was modeled by the reduction in the number of unpaved miles assumed to be present in the nonattainment area. The EXPLORA model calculates fugitive dust twice, first assuming that all roads are paved and then assuming that all are unpaved. A FORTRAN program, dustMAG, which acts as a post-processor to EXPLORA reads a data file containing the amount of unpaved roads by modeling grid cell. This data is used to apportion the amount of paved versus unpaved dust output by EXPLORA.

Commitments were received from many jurisdictions to pave, gravel, or otherwise stabilize particulate emissions from unpaved roads. A commitment to reduce the unpaved roads in each jurisdiction resulted in a reduction in the number of unpaved roads in grid cells in that jurisdiction. The reduction was applied to the data file called by dustMAG.

NO_x, and SO_x: This measure was not modeled for NO_x and SO_x because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	12.2	5.8
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

The Arizona Legislature, Maricopa County, and 19 cities and towns have submitted commitments to implement various programs to reduce particulate emissions from unpaved roads and alleys.

C. Legal Authority

- S.B. 1427

- A.R.S. 9-500.04
- A.R.S. 49-474.01
- A.R.S. 9-240

D. Implementing Agency

Maricopa County
19 cities and towns in the Maricopa County PM-10 nonattainment area

E. Schedule and Resources

Implementation of this measure is ongoing. For several jurisdictions, resource requirements can be accommodated within the existing budget. In some jurisdictions, new funds were budgeted or will be budgeted or resources will be provided by the property owner. On December 8, 1999, the Maricopa Association of Governments Regional Council approved an amendment to the FY 2000-2004 Transportation Improvement Program (TIP) to add projects to pave unpaved roads in Maricopa County, including private roads which have been publicly maintained, to be funded with approximately $7.85 million in Congestion Mitigation/Air Quality (CMAQ) funds. Maricopa County will provide matching dollars, representing at least 50% of the project costs. In addition, on December 7, 1999, the MAG Transportation Review Committee recommended that an additional $5.4 million in CMAQ funds be allocated to pave unpaved roads and shoulders in the FY 2001-2005 TIP.

F. Monitoring and Tracking Program

- The jurisdictions will be tracking progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

4. Reduce Particulate Emissions from Unpaved Parking Lots

Local Government Commitments: Eighteen cities and towns in Maricopa County have made commitments to implement measures which reduce PM-10 emissions from unpaved parking lots. Twelve jurisdictions require all new parking lots to be paved, graveled or dustproofed. Seven jurisdictions reported that all or "high-use" city-owned lots have been paved. Some jurisdictions require paving, graveling or dust stabilization for all existing parking lots and are funding additional inspectors to enforce unpaved parking lot ordinances. Two jurisdictions indicated that all commercial "high-use" parking lots are paved. For

special events, one jurisdiction requires that parking areas be dust-free before, during, and after the event. A special events permit is not issued unless the parking lot is dust-free.

Maricopa County Rule 310 Commitment: Maricopa County (Revised 1999 commitment) indicates that the Measure, Strengthening and Better Enforcement of Fugitive Dust Control Rules, involves achieving improved compliance with existing air pollution rules through the provision of additional inspection and enforcement personnel. The fugitive dust control rule, Maricopa County Rule 310.01, addresses the reduction of PM-10 emissions from unpaved parking lots.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Implementation Schedule: Implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development and performance measures. Specific commitments are described under Measure 1. Strengthening and Better enforcement of Fugitive Dust Control Rules; excerpts pertaining to unpaved roads and alleys are reiterated below.

Public Outreach/Education:

January - September 1999	Coordinated with EPA on notifications to vacant lot owners, unpaved parking lot owners, and cities and towns

Increase Inspection Frequency Part I--Sources Not Requiring a Permit:

June 1999	Board adopted Rule 310.01 that addressed vacant lots, unpaved parking lots and public unpaved roads.
April 2000	Develop inspection priorities for vacant lot and unpaved parking lot inspections considering lot size and number of sources. Larger lots will be inspected first

	and smaller lots in succeeding years. Department resources will be directed initially to areas that lack municipal programs.
Annually thereafter	Review reports filed on those plans

A. Modeling Methodology

PM-10: Assumptions related to the effectiveness of control measures on the emissions from vehicular traffic on unpaved parking lots were based on data provided by MCESD. It was assumed that an equal number of parking lots would be paved, treated with gravel, and treated with chemical stabilizers. Emissions from vehicular travel on unpaved parking lots were assumed to be 60 percent controlled in 2006.

Disturbed vacant land consists of two subcategories: unpaved parking lots and vacant lots. Since different control measures apply to vacant lots and unpaved parking lots, control assumptions were calculated separately for these two subcategories of disturbed vacant land. Based on the MAG microscale study, 24 percent of the disturbed vacant land in the nonattainment area is assumed to be unpaved parking lots.

Windblown dust from unpaved parking lots was assumed to be 71 percent controlled in 2006. The control measures assumed to be used on vacant lots were chemical stabilizers, gravel, and paving. Since unpaved parking lots comprise 24 percent of the disturbed vacant land, the 71 percent control level only applies to 24 percent of the disturbed vacant land emissions. The control factor, typically one minus the control level, must be adjusted to reflect control of a portion of the disturbed vacant land emissions. This adjustment is shown below:

The control factor was calculated as follows:

CF = (0.76)+((0.24)*(1-0.7093)) = 0.8298.

In cooperation with MAG and ADEQ, MCESD conducted an extensive microscale PM-10 field study in 1995. The land uses in microscale areas of Chandler and South Phoenix were mapped by field inspectors in each quarter of 1995. The field observations from the fourth quarter were used to estimate the fraction of unpaved parking lots smaller than 5,000 square feet. The aforementioned size is the cutoff point for which Rule 310 will be applied. Based on the field study, it was estimated that 99.98 percent of the unpaved parking lot surface area is from unpaved parking lots greater than or equal to 5,000 square feet. It was assumed that this relative size distribution existed throughout the nonattainment area. Accordingly, a rule penetration of 100 percent was assumed to be reasonable for Rule 310 application to unpaved parking lots.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.4008 to unpaved parking lots (ASC2311000040). A /PROJECT AMS/ packet applied a factor of 0.8298 to windblown emissions from vacant land (ASC2730100000).

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006		
	Metric Tons Per Day		Percent
PM-10	Fugitive 3.17 Windblown 0.56	3.73	1.8
NO_x	Not Modeled		Not Modeled
SO_x	Not Modeled		Not Modeled

B. Enforceable Commitment

Maricopa County, Arizona Department of Transportation, and 18 cities and towns have committed to implement various programs to control particulate emissions from unpaved parking lots.

C. Legal Authority

- A.R.S. 9-240

D. Implementing Agency

Maricopa County
Arizona Department of Transportation
18 cities and towns

E. Schedule and Resources

Implementation of this measure is ongoing. For several jurisdictions, resource requirements can be accommodated within the existing budget. In a few jurisdictions, new funds were budgeted or will be budgeted or resources will be provided by the property owner.

F. Monitoring and Tracking Program

- Maricopa County, ADOT, and the cities and towns will track the progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

5. Reduce Particulate Emissions from Vacant Disturbed Lots

Local Government Commitments: Eighteen cities and towns in Maricopa County have made commitments to implement measures which reduce PM-10 emissions from vacant disturbed lots. Seven jurisdictions require or will require: stabilization of disturbed soil after 15 days of inactivity; preventing access or dustproofing lots disturbed by vehicles; and controlling dust before, during, and after weed abatement operations. Seven jurisdictions will develop educational materials and outreach programs to inform property owners of the need to control dust on vacant disturbed lots, will work cooperatively with Maricopa County to control fugitive dust, and will fund additional inspectors to enforce vacant lot ordinances.

For vacant lots disturbed by motor vehicles, several jurisdictions prohibit displaying vehicles for sale on vacant property, require installation of signs and barriers, and prohibit operation of a vehicle on a vacant lot unless the lot is dust-free. One jurisdiction requires all owners of vacant lots used by vehicles to eliminate access. For nonmotor vehicle disturbances, some jurisdictions do not allow any grading without a building permit and will require evidence of a Maricopa County Rule 310 permit before a grading and drainage permit is issued.

For weed abatement operations on vacant disturbed lots, several jurisdictions will use mowing or other stabilization for weed control on city owned facilities and will distribute information encouraging mowing, rather than disking or blading for weed abatement. Other jurisdictions will report cases to Maricopa County when excessive dust from blading for weed abatement is witnessed.

Maricopa County Rule 310 Commitment: Maricopa County (Revised 1999 Commitment) indicates that the Measure, Strengthening and Better Enforcement of Fugitive Dust Control Rules, involves achieving improved compliance with existing air pollution rules through the provision of additional inspection and enforcement personnel. Maricopa County Rule 310.01 addresses the reduction of PM-10 emissions from vacant disturbed lots.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473,

designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Implementation Schedule: Implementation of an enhanced fugitive dust program includes public outreach/education, rule development, staffing, inspection frequency, policy development, enforcement plan development and performance measures. Specific commitments are described under Measure 1. Strengthening and Better enforcement of Fugitive Dust Control Rules; excerpts pertaining to unpaved roads and alleys are reiterated below.

Public Outreach/Education:

January - September 1999	Coordinated with EPA on notifications to vacant lot owners, unpaved parking lot owners, and cities and towns

Increase Inspection Frequency Part I--Sources Not Requiring a Permit:

June 1999	Board adopted Rule 310.01 that addressed vacant lots, unpaved parking lots and public unpaved roads.
April 2000	Develop inspection priorities for vacant lot and unpaved parking lot inspections considering lot size and number of sources. Larger lots will be inspected first and smaller lots in succeeding years. Department resources will be directed initially to areas that lack municipal programs.
January 2000	Department obtains copies of local government plans developed pursuant to A.R.S. Section 9-500.04 or 49-474.01 to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials.
Annually thereafter	Review reports filed on those plans

A. Modeling Methodology

PM-10: Disturbed vacant land consists of two subcategories: unpaved parking lots and vacant lots. Since different control measures apply to vacant lots and unpaved parking lots, control assumptions were calculated separately for these two subcategories of disturbed vacant land. Based on the MAG microscale study, 76 percent of the disturbed vacant land in the nonattainment area is assumed to be disturbed vacant lots.

Assumptions related to the effectiveness of control measures on the emissions from disturbed vacant lots were based on the effectiveness reported in the ADEQ microscale plan. It was assumed that an equal number of vacant disturbed lots would be treated with mulch or vegetative cover, treated with gravel, and treated with chemical stabilizers. Emissions from vacant disturbed lots were assumed to be 71 percent controlled in 2006. Since vacant disturbed lots comprise 76 percent of the disturbed vacant land, the 71 percent control level only applies to 76 percent of the disturbed vacant land emissions. The control factor, typically one minus the control level, must be adjusted to reflect control of a portion of the disturbed vacant land emissions. This adjustment is shown below:

The control factor was calculated as follows:

CF = (0.24)+((0.76)*(1-0.7093)) = 0.4609.

In cooperation with MAG and ADEQ, MCESD conducted an extensive microscale PM-10 field study in 1995. The land uses in microscale areas of Chandler and South Phoenix were mapped by field inspectors in each quarter of 1995. The field observations from the fourth quarter were used to estimate the number of vacant lots smaller than 21,780 square feet. The aforementioned size is the cutoff point for which Rule 310 will be applied. Based on the field study, it was estimated that 99.96 percent of the vacant lot surface area is from vacant lots greater than or equal to 21,780 square feet. It was assumed that this relative size distribution existed throughout the nonattainment area. Accordingly, a rule penetration of 100 percent was assumed to be reasonable for Rule 310 application to vacant lots.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.4609 to windblown emissions from vacant land (ASC2730100000).

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	1.79	0.9
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

Maricopa County, Arizona Department of Transportation, and 18 cities and towns have committed to implement various programs to reduce particulate emissions from vacant disturbed lots.

C. Legal Authority

- A.R.S. 9-240

D. Implementing Agency

Maricopa County
Arizona Department of Transportation
18 cities and towns

E. Schedule and Resources

Implementation of this measure will be ongoing. For several jurisdictions, resource requirements can be accommodated within the existing budget. In some jurisdictions, new funds and personnel will be budgeted for or resources will be provided by the property owner.

F. Monitoring and Tracking Program

- Maricopa County, ADOT, and the cities and towns will track the progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

6. Dust Abatement and Management Plan for State Lands

Arizona Legislature passed S.B. 1427 in 1998 which appropriated $200,000 from the State General Fund to the State Land Department for implementing a Dust

Abatement and Management Plan to include measures to control particulate pollution on State Trust Lands in Area A. The plan may include measures to close areas to illegal use by off-highway vehicles, closing roads that are unused or illegal, and increasing the enforcement of no trespassing areas (Section 36 of S.B. 1427).

A. Modeling Methodology

This measure was modeled in combination with Measure 5. Reduce Particulate Emissions from Vacant Disturbed Lots. The annual estimated emission reduction is documented under item A. Modeling Methodology.

B. Enforceable Commitment

Arizona Legislature passed S.B. 1427 in 1998, Section 36 of which appropriates $200,000 from the State General Fund to the State Land Department.

C. Legal Authority

- S.B. 1427
- A.R.S. 37-102

D. Implementing Agency

Arizona State Land Department

E. Schedule and Resources

Arizona Legislature passed S.B. 1427 in 1998, Section 36 of which appropriates $200,000 from the State General Fund to the State Land Department. The Department has the authority to hire 1 full-time staff person (employment began February 1999) to oversee the implementation of the Dust Abatement and Management Plan.

The staff person will inventory all of State Trust Lands located in Area A and coordinate the enactment of statutory, contractual, and department-implemented dust control measures on state trust lands in Area A. State Trust Lands comprise an estimated 15 percent of lands within Area A (277,040 acres).

The program will be ongoing to maintain control measures once fully implemented.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

7. PM-10 Efficient Street Sweepers

This measure involves the use of PM-10 efficient street sweepers to reduce particulate emissions from paved roads. Presently, the South Coast Air Quality Management District is working with the California Air Resources Board (CARB) and Society of Automotive Engineers (SAE) to develop a test protocol for certification of PM-10 efficient street sweeper in response to CARB Rule 1186. The CARB standards of certification are not yet available.

Once the CARB certification standards are developed and PM-10 efficient street sweepers have been certified, the Maricopa Association of Governments (MAG) has agreed to coordinate a test assessing the applicability of the certified PM-10 efficient sweepers to specific conditions in the Maricopa County nonattainment area. The test may include, but not be limited to, an evaluation of operation parameters such as production rate, water usage (if applicable), transport speeds, and available literature on PM-10 efficient sweepers. The test would be conducted in high PM-10 concentration areas were significant source of emissions is vehicle reentrainment.

A. Modeling Methodology

PM-10: This measure was modeled by the adjustment of the paved road fugitive dust emission factors output by PART5 before those factors were input to EXPLORA. A Sierra Research report estimated the effect of replacing all current street sweepers with PM-10 efficient street sweepers on paved road fugitive dust emissions. The reduction was estimated assuming that all sweepers were converted and was specific to three facility types. MAG applied half of the reduction estimated in the Sierra Research report, since approximately half of the street sweepers are expected to be PM-10 efficient models by the modeling year 2006. The reduction was applied manually to the paved road fugitive dust emission rates in PART5.

NO_X, and SO_x: This measure was not modeled for NO_x and SO_x because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	1.12	0.5
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADOT, Maricopa County and 18 cities and towns have submitted commitments to review the results of the MAG PM-10 Efficient Street Sweeping Test. If these entities determine that the PM-10 efficient street sweeping units are economically and technologically feasible, they will purchase, lease, or contract to procure the PM-10 efficient units to replace older equipment, as it is retired.

Additionally, Maricopa County will purchase two interim technology PM-10 efficient sweepers to deploy in full-time use for operational experience and short term PM-10 improvements. The City of Surprise has also purchased one PM-10 efficient sweeper; the results of the use of this equipment will be available for review by MAG and EPA and for certification purposes. In addition, the Resolution to Adopt the Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Area includes a commitment from MAG for PM-10 Efficient Street Sweepers.

C. Legal Authority

- A.R.S. 49-406 and 28-332
- A.R.S. 11-251
- A.R.S. 9-240

D. Implementing Agency

Arizona Department of Transportation
Maricopa County
18 cities and towns in the Maricopa County PM-10 nonattainment area

E. Schedule and Resources

The schedule for implementing this measure is dependent upon the development of the certification standard and certification of PM-10 efficient street sweeping equipment by CARB, SAI, and the South Coast Air Quality Management District; the results of the MAG PM-10 Efficient Street Sweeping Test; and the evaluation of the MAG PM-10 Efficient Street Sweeping test by each local government. Therefore, a preliminary time line is provided as follows:

By December 1999 - Development of Certification Standards and Certification of Equipment by CARB, SAE, and South Coast Air Quality Management District.

By December 2001 - MAG PM-10 Efficient Street Sweeping Test.

By December 2002 - Determination of economic and technological feasibility. If feasible, begin to procure additional PM-10 efficient street sweepers to replace older

equipment as it is retried, or contract with another municipality or vendor which would employ a PM-10 efficient unit.

The Maricopa Association of Governments has allocated $70,000 for the PM-10 Efficient Street Sweeping Test in the MAG FY 1999 Unified Planning Work Program and Annual Budget. Some jurisdictions will also provide employees to participate with the MAG Street Sweeping Test. In addition, on December 8, 1999, the Maricopa Association of Governments approved an amendment to the FY 2000-2004 Transportation Improvement Program (TIP) to add projects allocating approximately $3.8 million in Congestion Mitigation Air Quality (CMAQ) funds to purchase PM-10 certified street sweepers. In addition, on November 23, 1999, the MAG Transportation Review Committee recommended an additional $1.9 million in CMAQ funds be allocated to purchasing street sweepers in the FY 2001-2005 TIP. It is anticipated that the FY 2001-2005 TIP will be approved by the Regional Council in during the Summer 2000, after completion of the conformity determination. In addition, the Resolution to Adopt the Revised MAG 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Area includes a commitment from MAG for PM-10 Efficient Street Sweepers.

F. Monitoring and Tracking Program

- ADOT, Maricopa County, and the cities and towns will track the progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

8. Curbing, Paving, or Stabilizing Shoulders on Paved Roads (Includes Painting Stripe on Outside of Travel Lane)

Many jurisdictions have identified programs to install or require the installation of curbs and/or stabilized shoulders on paved roads. Many jurisdictions require newly constructed streets to include curbing and paving of shoulders. In some jurisdictions with unpaved shoulders, edgelines are required to be painted on outside travel lanes.

A. Modeling Methodology

PM-10: This measure will be modeled using the EMSCOR post-processing program. The EMSCOR program is capable of applying a reduction factor to emissions in the entire modeling domain and over the entire modeled period, or by sub-region for a portion of the modeled period.

It is assumed that this measure will result in a reduction in the reservoir of entrainable dust which exists on the uncurbed and unpaved shoulders of paved roads by curbing, paving, or otherwise stabilizing curbs and shoulders of unpaved roads. It is assumed that the per-mile reduction is 3.8 kilograms per mile-day as estimated in the Particulate Control Measure Feasibility Study: Final Report (Sierra Research, Inc., January 24, 1997). Based on these assumptions and the local government submittals, it is estimated that total emissions will be reduced by 1.03 metric tons per day in the year 2006.

An EMSCOR job file applied a factor of 0.9859 to total onroad emissions. The newly created job file will be executed before the base case background emissions have been merged.

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	1.03	0.5
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADOT and 17 cities and towns in Maricopa County have committed to implement various programs to curb, pave or stabilize shoulders on paved roads. Nine cities and towns have committed to paint edge lines on the outside of travel lanes, where appropriate.

C. Legal Authority

- A.R.S. 49-406 and 28-332
- A.R.S. 9-240

D. Implementing Agency

Arizona Department of Transportation
17 cities and towns in Maricopa County

E. Schedule and Resources

Implementation of this measure is ongoing. Funding for this measure is allocated through the normal budgeting process of each jurisdiction and ADOT.

F. Monitoring and Tracking Program

- ADOT and the cities and towns will track progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

9. Reduce Particulate Emissions from Unpaved Shoulders on Targeted Arterials

Arizona Legislature Commitment: The Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to develop and implement plans to stabilize targeted unpaved roads, alleys and stabilize unpaved shoulders on targeted arterials beginning January 1, 2000. The plans are required to address performance goals, criteria for targeting the roads, alleys and shoulders, a schedule for implementation, funding options and reporting requirements (A.R.S. 9-500.04 and 49-474.01). In accordance with S.B. 1427, 22 local governments will be required to develop and implement these plans.

Local Government Commitments: In addition, Maricopa County and 17 cities and towns have committed to additional measures to stabilize unpaved shoulders. These measures include, but are not limited to: 6 jurisdictions have committed to paving, graveling or stabilizing more than 100 miles of unpaved shoulders over the next five years; 6 require paving with curb and gutter in new developments; 5 will allow natural vegetation to grow on unpaved shoulders; 5 require curb and gutter as arterials are upgraded; and 2 have paved unpaved shoulders with 19 miles of bicycle lanes in FY98/99.

A. Modeling Methodology

This measure was modeled in combination with Measure 8. Curbing, Vegetating, or Chemically Stabilizing Shoulders on Paved Roads. The annual estimated emission reduction is documented under item A. Modeling Methodology.

B. Enforceable Commitment

The Arizona Legislature, Maricopa County and 17 cities and towns have submitted commitments to implement various programs to reduce particulate emissions from unpaved shoulders.

C. Legal Authority

- S.B. 1427
- A.R.S. 9-500.04
- A.R.S. 49-474.01
- A.R.S. 9-240

D. Implementing Agency

Maricopa County
17 cities and towns in the Maricopa County PM-10 nonattainment area

E. Schedule and Resources

Implementation of this measure is ongoing. For several jurisdictions, resource requirements can be accommodated within the existing budget. In others, new funds were or will be budgeted or resources will be provided by property owners. On December 7, 1999, the MAG Transportation Review Committee recommended an additional $5.4 million in CMAQ funds be allocated to pave unpaved roads and shoulders in the FY 2001-2005 TIP. Jurisdictions receiving the CMAQ funds will provide local matching dollars, in most cases, representing 50% of the total paving cost. It is anticipated that the FY 2001-2005 TIP will be approved by the Regional Council in during the Summer 2000, after completion of the conformity determination.

F. Monitoring and Tracking Program

- The jurisdictions will be tracking progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

10. Paving, Vegetating and Chemically Stabilizing Unpaved Access Points Onto Paved Roads (Especially Adjacent to Construction/Industrial Sites)

Many jurisdictions have identified programs to control unpaved access points onto paved roads. Many jurisdictions also monitor construction sites to eliminate carry-out mud and dirt and require roads serving new commercial and residential areas be paved. Several jurisdictions will apply dust proof prevention materials to the unpaved alleys or parking lots.

A. Modeling Methodology

PM-10: This measure was modeled using the EMSCOR post-processing program. The EMSCOR program is capable of applying a reduction factor to emissions in the entire modeling domain and over the entire modeled period, or by sub-region for a portion of the modeled period.

It was assumed that this measure will result in a reduction in the deposition of entrainable dust onto paved roads by paving or otherwise stabilizing unpaved access points to paved roads. It was assumed that the per-unpaved access point reduction is 0.41 kilograms per access point-day as estimated in the Particulate Control Measure Feasibility Study: Final Report (Sierra Research, Inc., January 24, 1997). Based on these assumptions and local government submittals it was estimated that total emissions will be reduced by 0.43 metric tons per day in the year 2006.

An EMSCOR job file applied a factor of 0.9941 to total onroad PM-10 emissions. The newly created job file was executed before the base case background emissions were merged.

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.43	0.2
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADOT and 16 cities and towns in Maricopa County have committed to implement various programs to control dust from unpaved access points onto paved roads.

C. Legal Authority

- A.R.S. 49-406 and 28-332
- A.R.S. 9-240

D. Implementing Agency

Arizona Department of Transportation
16 cities and towns in Maricopa County

E. Schedule and Resources

Implementation of this measure is ongoing. Funding for this measure is allocated through the normal budgeting process of each jurisdiction and ADOT.

F. Monitoring and Tracking Program

- ADOT and the cities and towns will track progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

11. PM-10 Episode Thresholds

Maricopa County, 1999, indicates that this measure involves the revision of the Maricopa County Residential Woodburning Restriction Ordinance to include an action level for declaring a restricted-burn period based on particulate levels. Under this program, high air pollution advisories are called whenever the Control Officer determines that meteorological conditions are conducive to an accumulation of carbon monoxide and/or particulates in exceedance of the standards or when air quality reaches other limits established by the Control Officer. The Control Officer currently bases the decision on carbon monoxide levels. However, the revised ordinance will provide triggers for basing decisions on particulates as well.

Maricopa County, through authority granted in A.R.S. 11-871, adopted a Residential Woodburning Restriction Ordinance in 1994. Pursuant to A.R.S. 11-871, the Board designated the Environmental Services Department to develop, implement and enforce an ordinance relating to residential wood burning restrictions. Pursuant to A.R.S. 11-871, the County is specifically authorized to issue warnings or a uniform civil ticket and complaint for violations of the ordinance.

The Department will revise the Residential Woodburning Restriction Ordinance for Board consideration. The revised ordinance will include ambient PM-10 concentration triggers for calling high air pollution advisories at approximately 110 to 120 $\mu g/m^3$. The ordinance will also include factors which influence the decision. Examples of factors include the range of ambient temperatures to ensure that conditions are cold enough that residential woodburning will occur and the timing

or meteorological frontal systems moving into the area. The ordinance will be revised under the following schedule:

October - April 1999	Research and draft revised ordinance.
May - June 1999	Workshop proposed revisions.
July - August 1999	Board consideration of proposed revisions.

Existing staff and funding will be provided for this measure. The Department designates approximately $30,000 of its Federal 105 grant for the woodburning program including both public information and enforcement. Additional resources will not be necessary to fulfill the commitment set forth.

Once a high air pollution advisory is called, Departmental staff on stand-by are notified and then survey neighborhoods for residences in which burning takes place. If identified, a resident is issued a warning for the first violation. Pursuant to A.R.S. 11-871, additional violations are subject to the imposition of a civil penalty of $50 for the second violation and $100 for a third or any subsequent violation. The Maricopa County Environmental Services Department compiles an annual report which includes the number of advisories and number of enforcement actions.

A. Modeling Methodology

PM-10, NO_x, and SO_x: Jo Crumbaker from the Maricopa County Environmental Services Department has indicated that the PM-10 concentration threshold required to call a PM-10 episode will be set at a level that will result in ten episodes per season. These episode days are in addition to the carbon monoxide episode days. The wood-burning season extends from November 1 through March 31.

Based on the MAG residential wood combustion survey, estimates of the seasonal distribution of fireplace wood combustion were calculated. The fraction of the annual fireplace wood combustion occurring in each month was divided by the days in the corresponding month to estimate the fraction of annual fireplace wood combustion occurring on each day of each month. The same procedure used to calculate the seasonal distribution of fireplace emissions was used to estimate the seasonal distribution of woodstove emissions.

Based on an analysis of historical measured PM-10 concentrations from the PM-10 nonattainment area, Sierra Research estimated the months in which the ten PM-10 episodes would be most likely to occur. The number of no-burn days in each month was multiplied by the fraction of annual emissions occurring on a day in the corresponding month to estimate the fraction of annual emissions that occur on the ten no-burn days.

Accordingly, if no wood burning occurred on the ten no-burn days, annual fireplace emissions would be reduced by 7.2 percent and annual woodstove emissions would

be reduced by 7.87 percent. Assuming that 80 percent of residents comply with the no-burn requirement, annual emissions from fireplaces and woodstoves would be reduced by 5.76 and 6.296 percent, respectively.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.9424 to fireplaces (ASC2104008001) for PM-10, NO_x, and SO_x emissions. A /PROJECT AMS/ packet applied a factor of 0.9370 to woodstoves (ASC2104008010) for PM-10, NO_x, and SO_x emissions.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.07	<0.1
NO_x	0.01	<0.1
SO_x	<0.01	<0.1

B. Enforceable Commitment

The ordinance will be revised under the following schedule:

October - April 1999	Research and draft revised ordinance.
May - June 1999	Workshop proposed revisions.
July - August 1999	Board consideration of proposed revisions.

C. Legal Authority

- A.R.S. 11-871

D. Implementing Agency

Maricopa County

E. Schedule and Resources

Existing staff and funding will be provided for this measure. The Department designates approximately $30,000 of its Federal 105 grant for the woodburning program including both public information and enforcement. Additional resources will not be necessary to fulfill the commitment set forth.

F. Monitoring and Tracking Program

- Once a high air pollution advisory is called, Departmental staff on stand-by are notified and then survey neighborhoods for residences in which burning takes place. If identified, a resident is issued a warning for the first violation. Pursuant to A.R.S. 11-871, additional violations are subject to the imposition of a civil penalty of $50 for the second violation and $100 for a third or any subsequent violation.
- The Maricopa County Environmental Services Department compiles an annual report which includes the number of advisories and number of enforcement actions.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

12. Restaurant Charbroiler Controls

Maricopa County (Revised 1999 Commitment) indicates that this measure involves developing a new rule to require existing chain-driven charbroilers, typically found in restaurants specializing in grilled meat products, to be equipped with emission control equipment. All new charbroilers would have to be similarly equipped prior to commencement of operations. Based on a preliminary survey, approximately 90 of the County's 9,000 restaurants would be affected.

The Maricopa County Board of Supervisors is authorized by A.R.S. 49-479 to adopt rules for air pollution control and by A.R.S. 49-480 to establish, administer and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. 49-471, the executive head of the department designated under A.R.S. 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. 49-502, 49-511, 49-512 and 49-513.

A new rule will be developed for Board consideration under the following revised schedule:

July - October 2000	Research and draft new rule.
November - March 2001	Workshop proposed new rule.
March - May 2001	Board consideration of proposed rule.

The Maricopa County Environmental Services Department has 16 inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. The Department's annual revenue for the air quality program is

approximately $2.6 million. Any incremental costs to the County will be covered by the permit program fee revenue.

These requirements would be administered through a permit program which includes review of the permit, inspection of facilities, source test of equipment and review of records and activities. The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation. The Department will track the number of notices of violations, other enforcement options and the amount of penalties for rule violations.

A. Modeling Methodology

PM-10: Most of the assumptions used in modeling the impact of this measure were taken from the MAG Most Stringent PM-10 Control Measure Analysis report (MSM report), April 1998. In order to estimate the impact of this measure, it was necessary to determine the fraction of the charbroiling emissions in the PM-10 inventory due to restaurants. The MSM report indicated that there were 95 restaurants in 1998 that had charbroilers. This number was projected back to 1994 based on the change in population between 1994 and 1998. This projection resulted in an estimate of 84 restaurants with charbroilers in 1994. Data from the MSM report indicated that 629 pounds of PM-10 is emitted from each restaurant per year. Therefore, there were 52836 pounds (23.97 metric tons) of PM-10 emitted from restaurant charbroilers in 1994. In the 1994 PM-10 inventory, there are 227.08 metric tons per year from charbroiling. Therefore restaurant charbroiling contributes 10.56 percent of the charbroiling emissions in the inventory.

As indicated in the MSM report, it was assumed that the control equipment required for charbroilers was 83 percent effective in reducing PM-10 emissions. In addition, it was assumed that 80 percent of the restaurants in the nonattainment area complied with the regulation. Therefore, this measure could reduce restaurant charbroiler emissions by 66.4 percent. Since only 10.56 percent of the charbroiling emissions in the PM-10 inventory are from restaurant charbroilers, this measure will reduce total charbroiling PM-10 emissions by seven percent.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.9299 to charbroiling (ASC 2302002000) for PM-10 emissions.

NO_x, and SO_x: This measure was not modeled for NO_x and SO_x because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.07	<0.1
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

A new rule will be developed for Board consideration under the following schedule:

December - April 1999	Research and draft new rule.
May - June 1999	Workshop proposed new rule.
July - August 1999	Board consideration of proposed rule.

C. Legal Authority

- A.R.S. 49-479
- A.R.S. 49-480
- A.R.S. 49-473
- A.R.S. 49-471
- A.R.S. 49-502, 49-511, 49-512 and 49-513.

D. Implementing Agency

Maricopa County

E. Schedule and Resources

The Maricopa County Environmental Services Department has 16 inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. The Department's annual revenue for the air quality program is approximately $2.6 million. Any incremental costs to the County will be covered by the permit program fee revenue.

F. Monitoring and Tracking Program

- These requirements would be administered through a permit program which includes review of the permit, inspection of facilities, source test of equipment and review of records and activities.
- The Department's enforcement options include orders of abatement, civil actions for injunctive relief or civil penalties, and filing a class 1 misdemeanor citation.

- The Department will track the number of notices of violations, other enforcement options and the amount of penalties for rule violations.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

13. Long - Term Fuel Reformulation: From and After May 1, 1999

Arizona Legislature passed H.B. 2307 in 1997 which contains requirements for the sale of gasoline from and after May 1, 1999 in Area A, subject to an appropriate waiver granted under Section 211 (c)(4) of the Clean Air Act, that meets the following fuel reformulation options:

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the California Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirements in A.R.S. Section 41-2083, Subsections D and F.

- Gasoline that meets the standards for Federal Phase II Reformulated Gasoline, as provided in 40 CFR Section 80.41, paragraphs (a) through (h), in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirement in A.R.S. Section 41-2083 Subsections D and F.

- From and after November 1 through March 31 of each year, both of these fuels are required to meet the oxygenated fuel requirements in A.R.S. 41-2123.

By September 15, 1997, the Director of the Arizona Department of Environmental Quality in consultation with the Director of the Weights and Measures, is required to adopt rules for the 1998 and 1999 fuel reformulation requirements.

House Bill 2307 also provides that if the Environmental Protection Agency fails to approve the sale and use of both reformulated gasolines, the Director of the Arizona Department of Environmental Quality will adopt standards by rule for one of the following fuels:

- A gasoline that meets standards for Federal Phase II Reformulated Gasoline, as provided in 40 C.F.R. Section 80.41, paragraphs (a) through (h) in effect on January 1, 1997, that meets the maximum vapor pressure requirements of A.R.S. Section 41-2083, Subsections D and F. In addition,

the requirements of A.R.S. Section 41-2123 must be met November 1 through March 31 of each year.

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the California Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum vapor pressure requirements of A.R.S. Section 41-2083, Subsections D and F. In addition, the requirements of A.R.S. Section 41-2123 must be met November 1 through March 31 of each year.

A. Modeling Methodology

This measure was modeled in combination with the following measure, Winter Fuel Reformulation. The annual estimated emission reduction is documented in the modeling methodology section (Item A) of the Winter Fuel Reformulation measure, described below.

B. Enforceable Commitment

According to A.R.S. 41-2124(F), the Director of the Arizona Department of Environmental Quality in consultation with the Director of the Arizona Department of Weights and Measures shall adopt rules to incorporate the provisions of H.B. 2347, including requirements for recordkeeping, reporting, and analytical methods. The regulatory requirements for the Cleaner Burning Gasoline program were adopted in September 1998, and are contained in A.A.C. Title 20, Chapter 2, Article 7.

C. Legal Authority

- H.B. 2307
- A.R.S. 41-2083, Subsections D and F
- A.R.S. 41-2123
- A.R.S. 41-2124
- A.A.C. Title 20, Chapter 2, Article 7

D. Implementing Agency

Arizona Department of Weights and Measures

E. Schedule and Resources

The Arizona Cleaner Burning Gasoline Program was authorized under H.B. 2307, which provided the Arizona Department of Weights and Measures the authority to implement and enforce the provisions of the statute and rules related to

reformulated gasoline. In addition, H.B. 2307 appropriated $120,000 for the implementation of the rule. The Department has hired one staff member to enforce the Cleaner Burning Gasoline provisions of Article 7. The Department also conducts gasoline sampling and analysis to ensure the quality of gasoline within Maricopa County and other areas within Arizona. Under Article 7, producers of gasoline supplied to Area A are required to conduct gasoline sampling and analysis, recordkeeping, and reporting to ensure the quality of gasoline meets the provisions of the rule.

F. Monitoring and Tracking Program

- Article 7 contains recordkeeping and reporting requirements for regulated facilities within the gasoline distribution system.
- The Arizona Department of Weights and Measures collects and analyzes gasoline samples to determine the levels of constituents in the gasoline sold or offered for sale in area A.
- Gasoline refiners complying with averaging standards are required to conduct surveys to verify the quality of gasoline sold within area A.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 (I) and (J).

14. Winter Fuel Reformulation: California Phase 2 Reformulated Gasoline with 3.5 Percent Oxygen Content November 1 Through March 31

Arizona Legislature passed H.B. 2347 in 1998 which contains requirements for all gasoline produced and shipped to Maricopa County and sold or offered for sale for use in motor vehicles in Area A from and after November 1, 2000 through March 31, 2001 and from the period beginning November 1 through March 31 of each subsequent year. The fuel must comply with the standards for California Phase 2 Reformulated Gasoline, including alternative reformulations allowed by the predictive model, as adopted by the California Air Resources Board, and must meet the maximum vapor pressure requirements of 9 pounds per square inch in A.R.S. 41-2083, Subsections D and F. The fuel must also contain a minimum oxygen content by weight of 3.5 percent as required in A.R.S. 41-2123, Subsection A, Paragraph 2.

From November 1, 2000 through March 31, 2001 and each winter season of November through March thereafter, the Director of the Arizona Department of Weights and Measures is required to determine the average levels of the constituents in the gasoline sold or offered for sale in Area A. The Director of the Arizona Department of Environmental Quality must analyze the data and no later than July 1, 2001 and each July thereafter, determine the average daily carbon monoxide reductions resulting from the use of the gasoline during the preceding

winter season. If the average daily carbon monoxide reductions resulting from the gasoline are less than 90 percent of the goal of 32 tons per day in 2001, 31 tons per day in 2003 and 30 tons per day in 2005, 29 tons per day in 2007, or 28 tons per day in 2009, the Arizona Department of Environmental Quality will immediately notify the Governor, President of the Senate, and Speaker of the Arizona House of Representatives.

Also, any registered supplier or oxygenate blender may petition the Director of the Department of Weights and Measures to authorize the use of other oxygenates if an ethanol shortage is imminent. A petition must: (a) Identify specific supply conditions that will result in a shortage of ethanol. (b) Identify which oxygenate or oxygenates will be blended into gasoline for sale or use in Area A. (c) Demonstrate that the alternative oxygenate blend comes closest to meeting a 3.5 percent by weight oxygen content at reasonable cost. (d) Specify a time period for compliance with any provision of A.R.S. 41-2123, Subsection A, not to exceed 60 days.

The Director of Weights and Measures will either grant or deny the petition within seven days of its receipt. The decision to grant a waiver will be equally equitable to all registered suppliers or oxygenate blenders. The petition may be reauthorized for up to 30 days if the shortage conditions continue. The Director of the Arizona Department of Weights and Measures is required to consult with the Director of the Arizona Department of Environmental Quality prior to granting, reauthorizing or denying any petition.

The legislation specifies the intent of the Legislature to re-evaluate the existing authorized measures as well as alternative measures if this winter gasoline reformulation does not result in the carbon monoxide emission benefits specified in the bill (A.R.S. 41-2124).

A. Modeling Methodology

An annual average fuel formulation was estimated for 2001 and 2006, incorporating CARB Phase 2 gasoline for the winter season and an average of CARB Phase 2 and Federal RFG Phase 2 gasolines for the summer season. An annual average fuel formulation was also estimated for the base year, 1995, incorporating estimates of the gasoline formulation for the winter of 1994-1995 and the summer of 1996. The difference in emissions from gasoline powered onroad vehicles using the base case and future year annual average fuels was estimated.

PM-10 and NO_x: This measure was modeled by emissions post-processing. The EPA COMPLEX Model (COMPLEX) provides an estimate of the benefits of different fuel formulations on VOC and NO_x emissions from gasoline-powered onroad vehicles.

The difference between NO_x and VOC exhaust emissions from the future annual average fuel and the baseline annual average fuel was estimated using COMPLEX.

The fractional reduction in NO_x emissions estimated by COMPLEX was applied to the portion of onroad NO_x emissions which came from gasoline powered vehicles.

The reduction in VOC exhaust emissions is assumed to be proportional to the reduction in carbonaceous PM-10 emissions. The fraction of PM-10 emissions which are carbonaceous was estimated using a version of PART5 which was adjusted by EEA to print out a more detailed output, including the amount of exhaust PM-10 which is carbonaceous. The fractional reduction of PM-10 emissions which are carbonaceous PM-10 and are from gasoline powered vehicles was multiplied by the estimated reduction in VOC exhaust emissions. The resulting fractional reduction was applied to the estimate of onroad PM-10 exhaust emissions.

SO_x: It was assumed that most sulfur present in gasoline is emitted as either SO_2 or SO_4. A version of PART5 which was adjusted by EEA to accept different values for gasoline sulfur content was run to estimate the affect of the reduction in gasoline sulfur on Direct SO_4 emissions. The model estimated that the reduction in sulfur content expected would have no quantifiable impact on Direct SO_4 emissions. The fractional reduction in sulfur content expected in gasoline was applied entirely to the SO_2 emission estimates.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.03	<0.1
NO_x	7.04	2.6
SO_x	0.37	1.3

B. Enforceable Commitment

According to A.R.S. 41-2124(F), the Director of the Arizona Department of Environmental Quality in consultation with the Director of the Arizona Department of Weights and Measures shall adopt rules to incorporate the provisions of H.B. 2347, including requirements for recordkeeping, reporting, and analytical methods. The regulatory requirements for the Cleaner Burning Gasoline program were adopted in September 1998, and are contained in A.A.C. Title 20, Chapter 2, Article 7. These rules will be revised to implement the provisions of H.B. 2347, with a final rule effective date no later than February 2000.

C. Legal Authority

- H.B. 2347

- A.R.S. 41-2083, Subsections D and F
- A.R.S. 41-2123, Subsection A, Paragraph 2
- A.R.S. 41-2124, Subsection B, C, and D
- A.A.C. Title 20, Chapter 2, Article 7

D. Implementing Agency

Arizona Department of Weights and Measures

E. Schedule and Resources

The Arizona Cleaner Burning Gasoline Program was initially authorized under H.B. 2307, which provided the Arizona Department of Weights and Measures the authority to implement and enforce the provisions of the statute and rules related to reformulated gasoline. Additionally, H.B. 2307 appropriated $120,000 for the implementation of the rule. The Department has hired one staff member to enforce the Cleaner Burning Gasoline provisions of Article 7. Additionally the Department conducts gasoline sampling and analysis to ensure the quality of gasoline within Maricopa County and other areas within Arizona. Under Article 7, producers of gasoline supplied to Area A are required to conduct gasoline sampling and analysis, recordkeeping, and reporting to ensure the quality of gasoline meets the provisions of the rule.

F. Monitoring and Tracking Program

- Article 7 contains recordkeeping and reporting requirements for regulated facilities within the gasoline distribution system. The Arizona Department of Weights and Measures conducts an extensive sampling program to enforce the regulatory requirements within the gasoline distribution system. In addition, gasoline refiners complying with averaging standards are required to conduct surveys to verify the quality of gasoline in Area A.
- The Director of the Arizona Department of Weights and Measures is required to determine the average levels of the constituents in the gasoline sold or offered for sale in Area A.
- The Director of the Arizona Department of Environmental Quality must analyze the data and no later than July 1, 2001 and each July thereafter, determine the average daily carbon monoxide reductions resulting from the use of the gasoline during the preceding winter season. If the average daily carbon monoxide reductions resulting from the gasoline are less than 90 percent of the goal of 32 tons per day in 2001, 31 tons per day in 2003, 30 tons per day in 2005, 29 tons per day in 2007, or 28 tons per day in 2009, the Arizona Department of Environmental Quality will immediately notify the Governor, President of the Arizona Senate, and Speaker of the Arizona House of Representatives.

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 (I) and (J).

15. Require Pre-1988 Heavy-Duty Diesel Commercial Vehicles Registered in the Nonattainment Area to Meet 1988 Federal Emission Standards; Provide Incentives to Encourage Voluntary Accelerated Vehicle Replacement by the Year 2004

Arizona Legislature passed S.B. 1002 in 1996 which requires that beginning on January 1, 2004, a diesel powered motor vehicle with a gross vehicle weight of more than 26,000 pounds and which gross weight fees are paid pursuant to Section 28-206 in Area A will not be allowed to operate in Area A unless it was manufactured in or after the 1988 model year or is powered by an engine that is certified to meet or surpass emissions standards contained in 40 Code of Federal Regulations Section 86.088-11. This does mot apply to vehicles that are registered pursuant to Title 28, Chapter 2, Article 1.1. (A.R.S. 49-542 F.7.).

Regarding incentives to encourage accelerated replacement by the year 2004, the Arizona Legislature passed S.B. 1427 in 1998 which provided that diesel powered motor vehicles with a gross vehicle rating of more than 8,500 pounds that are registered in Area A which fail any random roadside vehicle test conducted by the State are eligible for up to $1,000 in repair or retrofit costs from the Voluntary Vehicle Repair and Retrofit Program. Qualified vehicle owners will be responsible for one-half of the costs of the qualified repairs and the other one-half of the costs will be funded from the program up to $1,000. No more than 20 percent of the program funds in any year may be used for these purposes. The Voluntary Vehicle Repair and Retrofit Program is administered by Maricopa County in coordination with the Arizona Department of Environmental Quality and Arizona Department of Transportation (A.R.S. 49-474.03 and Sections 34 and 36 of S.B. 1427).

A. Modeling Methodology

PM-10 and SO_x: This measure was modeled by modification of PART5 input files. In PART5, the Heavy Duty Diesel Vehicles (HDDV) category is divided into five sub-categories. Two of the categories include vehicles lighter than 26,000 pounds and are not affected by the measure. Two of the categories include vehicles greater than 26,000 pounds, which were affected by the measure. The fifth category included vehicles both lighter and heavier than 26,000 pounds. The registration distributions of the categories with vehicles greater than 26,000 pounds was adjusted to replace 74 percent of the pre-88 HDDVs with 1988 HDDVs. The registration distributions of the category with vehicles both heavier and lighter than 26,000 pounds was adjusted to replace 37 percent of the pre-88 HDDVs with 1988 HDDVs. The registration distributions of the categories with vehicles smaller than 26,000 pounds remained at the base case. The estimate of 74 percent reflects the

estimate that approximately 80 percent of HDDVs are commercially owned and that approximately 92 percent of the affected vehicles will meet the new emission standards. The estimate of 37 percent reflects half of the estimate of 74 percent, assuming that in the category of vehicles which are both lighter and heavier than 26,000 pounds half of the vehicles are heavier and half lighter than the cutoff weight.

NO_x: This measure was modeled by modification of MOBILE5a input files. In MOBILE5a, the HDDV category is not divided into sub-categories, as is the case with PART5. Using PART5, VMT fraction estimates by sub-category of HDDV were developed. The fractional estimates of pre-88 vehicle retirement estimated for the PM-10 and SO_x analysis were combined with VMT estimates from PART5 to estimate a net retirement fraction for the MOBILE5a category HDDVs. The registration distributions of HDDVs was adjusted to replace approximately 50 percent of the pre-88 HDDVs with 1988 HDDVs.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.02	<0.1
NO_x	-0.09	<0.1
SO_x	<0.01	<0.1

B. Enforceable Commitment

The provisions of S.B. 1002 were effective in 1996, and provide for enforcement of this control measure beginning January 1, 2004. The rules for testing of heavy-duty diesel vehicles are contained in Title 18, Chapter 2, Article 10, and will be revised to incorporate the requirements of S.B. 1002 prior to the time when the provisions are to be enforced.

C. Legal Authority

- S.B. 1002
- A.R.S. 49-542(F)(7)

D. Implementing Agency

Arizona Department of Environmental Quality
Arizona Department of Transportation, Division of Motor Vehicles

E. Schedule and Resources

Emission inspection and testing of heavy-duty diesel vehicles is an integral part of the Vehicle Emissions Inspection Program in area A, including both centralized testing and fleet testing requirements. Beginning January 1, 2004, this program will be modified to include a requirement to evaluate whether the vehicle meets the requirements of A.R.S. 49-542(F)(7). If a vehicle fails to meet the applicable requirements, the Division of Motor Vehicles will be notified and the vehicle's registration will be suspended.

F. Monitoring and Tracking Program

- The Arizona Department of Environmental Quality monitors the number of vehicles inspected under the Vehicle Emissions Inspection Program and will track the number of heavy-duty diesel vehicles that fail the emissions inspection due to the provisions of A.R.S. 49-542(F).
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

16 Coordinate Traffic Signal Systems

House Bill 2237 contains an appropriation of $500,000 in each of fiscal years 1997-1998 and 1998-1999 from the state general fund to the Arizona Department of Transportation for distribution to cities and counties for synchronization of traffic control signals within and across jurisdictional boundaries (Section 23 of H.B. 2237).

In addition, cities and towns responded to measure 97-TC-8, Coordinate Traffic Signal Systems. The synchronization of existing signals, as well as the enhancement of coordination in signal systems which are already synchronized, has been identified by many jurisdictions through a number of programs. Enhancement efforts range from large scale programs covering broad geographic areas to incremental additions of a few synchronized signals to the network. This includes both individual city projects and regional level programs, such as AZ Tech which is noted under Develop Intelligent Transportation Systems below.

A. Modeling Methodology

PM-10, NO_x, and SO_x: Based on submittals from local governments, as well as the provision in H.B. 2237 for signal coordination, it is estimated that the coordination will be enhanced for approximately 435 signals in the region by the end of the year 2000.

This measure was modeled by modification of MOBILE5a and PART5 input files and by emissions post-processing. The enhancement of traffic signal synchronization will reduce the idling time at traffic signals. The average emission rates at idle for each pollutant were estimated with the MOBILE5a and PART5 models. The emission rates at idle were multiplied by the estimated reduction in idle time across the modeling domain due to the control measure. The resulting product was a total reduction in emissions in the modeling domain. This emissions reduction for each pollutant was applied as an across-the-board reduction to the onroad emissions inventory.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	<0.01	<0.1
NO_x	0.19	<0.1
SO_x	<0.01	<0.1

B. Enforceable Commitment

An ongoing ADOT process is to synchronize, where warranted, traffic signals on the Controlled Access Freeways. Traffic signals on all state routes that pass through the City of Phoenix, including Grand Avenue, and the City of Tempe are synchronized.

C. Legal Authority

- Section 23 of H.B. 2237
- A.R.S. 9-500.04
- A.R.S. 28-642

D. Implementing Agency

Arizona Department of Transportation

E. Schedule and Resources

House Bill 2237 appropriates the sum of $500,000 in each of the fiscal years 1997-1998 and 1998-1999 from the general fund to ADOT for distribution to cities and counties for synchronization of traffic control signals within and across jurisdictional boundaries.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- ADOT, through the Transportation Planning Group Air Quality Planner, will annually review this measure to ensure the commitment is met by collecting data on the current synchronization status of municipal systems affecting State Routes in the nonattainment area.
- A.R.S. Section 49-406 I. and J.

17. National Low Emission Vehicle Program

Arizona Legislature passed S.B. 1427 in 1998 which requires the State to participate in the National Low Emission Vehicle Program adopted in 40 Code of Federal Regulations Part 9, Part 85 and Part 86 effective March 9, 1998, as part of the long term air quality strategy. The State will not bear any of the administrative costs of the program. Also, the State retains the authority to adopt any alternative emissions reduction program which demonstrates improved air quality benefits for the State (A.R.S. 49-556).

A. Modeling Methodology

PM-10 and SO_x: This measure was not modeled for PM-10 or SO_x due to the limitations of the PART5 model.
NO_x: This measure was modeled by modification of MOBILE5a input files. The MOBILE5a model has a diagnostic feature which makes the modeling of the National LEV program possible.

As a non-OTR state (ozone transport region), Arizona will receive cars that meet the National Low Emitting Vehicle (NLEV) standards beginning in the 2001 model year at the latest. MOBILE5a assumes that new model year light duty vehicles become available on October 1 of the previous year.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	14.39	5.3
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

The Environmental Protection Agency will be responsible for implementation and enforcement of the NLEV program.

C. Legal Authority

- S.B. 1427
- A.R.S. 49-556
- 40 CFR Parts 9, 85, and 86

D. Implementing Agency

Environmental Protection Agency

E. Schedule and Resources

The NLEV program is enforced by EPA through a federal rule promulgated on March 9, 1998 (40 CFR Parts 9, 85, and 86). According to the provisions of the rules, vehicles meeting the NLEV program standards will be required to be sold in Arizona, beginning with the 2001 model year.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

18. Tougher Enforcement of Vehicle Registration and Emission Tests

Arizona Department of Transportation indicates that this measure would use additional methods to increase the registration compliance of residents. According to the December 1996 Report of the Governor's Air Quality Strategies Task Force, the Motor Vehicle Division (MVD) of the Arizona Department of Transportation (ADOT) has instituted a comprehensive enforcement program. Three key elements of the new program are a Registration Enforcement Team, a Registration Enforcement Tracking System, and a New Resident Tracking Program. Through public participation, consistent policy and procedure application, and new tracking methods, MVD will enforce the Arizona registration laws to ensure vehicles in question are registered properly. This will be an ongoing effort.

Another phase of the Program is an initiative to coordinate ADOT efforts with other law enforcement agencies to assist MVD personnel in enforcing registration compliance. Other initiatives include a system user agreement between MVD and the City Courts to utilize information in conjunction with registration compliance and

discussions with U.S. West for obtaining information relating to new connect customers.

The Registration Compliance Program began in January 1994 with one full time employee responding only to complaints. In April of 1996, this program was enhanced with five MVD officers periodically conducting a statewide effort locating and issuing warning notices on vehicles suspected of being in violation of Arizona registration laws. This effort resulted in a substantial increase in Vehicle Licenses Tax (VLT) for 1996. As the program continues, there will be an enhanced focus on the local vehicles not in compliance.

Administration of the program began with a required staff time equivalent to one full time employee. Currently, the required staff time is equivalent to eight full time employees. Additional staff requirements for the initial phase of the Registration Compliance Program will require a total of 12 full time (active) employees and one supervisor. The funding allocated for implementation of the Registration Compliance Program is included as part of the overall MVD budget.

Arizona Legislature passed S.B. 1427 in 1998 which requires school districts and special districts in Area A to prohibit parking in employee parking lots by employees who have not complied with emissions testing requirements. Cities, towns, and counties in Area A and Area B are currently subject to this provision (A.R.S. 49-552).

In 1999, the Arizona Legislature passed H.B. 2254 which requires each vehicle that is owned by the United States government and that is domiciled in this state for more than ninety consecutive days and each vehicle that is owned by a state or political subdivision of this state to comply with A.R.S. 49-542.

Collectively, the provisions in H.B. 2254 that apply to Tougher Enforcement of Vehicle Registration and Emissions Test Compliance include A.R.S. 49-557 and 49-541.01 D. and E.

A. Modeling Methodology

PM-10 and SO_x: This measure was not modeled for PM-10 or SO_x due to the limitations of the PART5 model.

NO_x: The report of the Governor's Air Quality Strategies Task Force (December 2, 1996) estimated that an additional 41,000 vehicles would be emission tested as a result of this measure. This figure has since been confirmed with ADOT as being a reasonable, and perhaps somewhat conservative, estimate of the number of vehicles registered due to this measure.

This measure was modeled for NO_x by an adjustment of the weighting between I/M and non-I/M emission factors from MOBILE5a. The number of vehicles registered in Maricopa County is approximately 1.83 million. The inspection of an additional 41,000 vehicles would be an additional 2.0 percent of the vehicles being emissions tested. The number of vehicles which participate in the I/M program was increased by 2.0 percent, changing the weighting from 89.6/10.4 to 91.6/8.4.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	0.29	0.1
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

This measure has been implemented by the Motor Vehicle Division of the Arizona Department of Transportation.

C. Legal Authority

- S.B. 1427
- A.R.S. 49-542, 557
- A.R.S. 49-541.01 D. and E.
- A.R.S. 49-552
- A.R.S. Title 28-202&203

D. Implementing Agency

Arizona Department of Transportation

E. Schedule and Resources

The Registration Compliance Program began in January 1994 with one full-time employee responding only to complaints. In April 1996, the program was enhanced with five MVD officers periodically conducting a statewide effort locating and issuing warning notices on vehicles suspected of being in violation of Arizona registration laws. This resulted in a substantial increase in Vehicle License Tax for 1996. As the program continues there will be an enhanced focus on the local vehicles not in compliance.

Administration of the program began with a required staff time equivalent to one full-time employee. Currently, the required staff time is equivalent to eight full time employees. Additional staff requirements for the initial phase of the Registration Compliance Program will require a total of 12 full time (active) employees and one supervisor. The funding allocated for implementation of the Registration Compliance Program is included as part of the overall MVD budget.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

19. Catalytic Converter Replacement Program

Arizona Legislature passed S.B. 1427 in 1998 which requires a person whose vehicle fails the Vehicles Emissions Inspection Test due to a faulty catalytic converter to replace it in Area A. These vehicles are not eligible for a waiver. The catalytic converter replacements are exempt from the existing repair cost limits for qualification for a waiver. Also, $275,000 was appropriated from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 to the utilization of the Vehicle Repair Grant Program and to implement the Catalytic Converter Replacement Program (A.R.S. 49-542 and Section 39 of S.B. 1427).

A. Modeling Methodology

PM-10 and SO_x: This measure was not modeled for PM-10 or SO_x due to the limitations of the PART5 model.

NO_x: This measure was modeled by an adjustment of the weighting between I/M and non-I/M emission factors from MOBILE5a in the EXPLORA model and an adjustment of the waiver rate in MOBILE5a. The Emissions Research Laboratory (ERL) of the Arizona Department of Environmental Quality (ADEQ) estimates that approximately 68 percent of vehicles which fail the I/M test do so primarily because of a faulty catalytic converter. This estimate was derived from research done for the Automotive Catalytic Converter Testing Program by the ERL.

The ERL is also expected to have a catalyst efficiency test in place as a part of the I/M program by 1999. This program would be designed to identify vehicles with faulty catalytic converters. These vehicles will not be eligible for I/M waivers and will be required to have a functioning catalytic converter in order to be driven legally. The program may be expected to reduce the waiver rate by 68 percent, as the 68 percent of vehicles failing the I/M program will be required to have a catalyst installed.

This measure cannot be modeled directly through the use of MOBILE5a, which does not have the option of estimating the reduction in emissions from any given fractional reduction in waiver rate from the base waiver rate, in this case 68 percent. MOBILE5a does have the option of reducing the percentage of vehicles receiving waivers to zero. MOBILE5a was run with zero waivers allowed in order to estimate the resulting decrease in NO_x emission rates in 2006. EXPLORA was run with the no waiver MOBILE5a emission rates weighted at approximately twice the base waiver MOBILE5a emission rates to produce final emission totals which reflect a reduction to the waiver rate by 68 percent. The waiver rate, which was four percent for pre-81 model years and three percent for 1981 and later model years, was effectively changed to 1.28 percent and 0.96 percent, respectively.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	0.21	<0.1
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADEQ is currently revising the vehicle emissions inspection rules found in Chapter 2, Article 10 to incorporate a methodology for testing the efficiency of catalytic converters on vehicles that fail the emissions inspection test. The rulemaking will be completed and effective no later than December 31, 1999.

C. Legal Authority

- S.B. 1427
- A.R.S. 49-542
- AAC Title 18, Chapter 2, Article 10

D. Implementing Agency

Arizona Department of Environmental Quality

E. Schedule and Resources

ADEQ is in the process of purchasing the equipment for the testing of catalytic converters. Once the equipment is received, the testing equipment will be integrated into the Gordon-Darby, Inc. testing system. ADEQ has staff in place who

will perform the catalytic converter testing at the waiver facilities, beginning January 1, 2000.

F. Monitoring and Tracking Program

- The catalytic converter replacement program will be a routine part of the Vehicle Emissions Inspection Program.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 (I) and (J).

20. One-Time Waiver from Vehicle Emissions Test

Arizona Legislature passed S.B. 1002 in 1996 which limits the issuance of a waiver for failure to comply with the emission testing requirements to one-time only beginning January 1, 1997 (A.R.S. 49-542 D).

Also, the Arizona Legislature passed House Bill 2237 in 1997 which requires the Arizona Department of Environmental Quality to submit a report on one-time vehicle waivers to the Governor, President of the Senate, and Speaker of the House of Representatives by September 30, 1997. The report is required to include: a description of the air quality benefits from the measure; recommendations on making the provision more effective, considering the impact on motorists; and recommendations on improving motorists access to the repair grant program.

A. Modeling Methodology

PM-10 and SO_x: This measure was not modeled for PM-10 or SO_x due to the limitations of the PART5 model.
NO_x: This measure was modeled by an adjustment of the weighting between I/M and non-I/M emission factors from MOBILE5a and the modification of MOBILE5a input files. This measure cannot be modeled directly through the use of MOBILE5a, which does not have the option of limiting the number of waivers to a given number of years. MOBILE5a does have the option of reducing the percentage of vehicles receiving waivers to zero. MOBILE5a was run with zero waivers allowed in order to estimate the resulting decrease in NO_x emission rates in 2006.

It was assumed that the average remaining vehicle life of a vehicle which has received a waiver is three years (page E-5 of Feasibility and Cost-Effective Study of New Air Pollution Control Measures Pertaining to Mobile Sources). It was assumed that the base case run included the three-year life after waiver implicitly through MOBILE5a. This measure would effectively reduce that three-year life to one year, and result in approximately two thirds of the reductions of a change to zero waivers. EXPLORA was run with the no waiver MOBILE5a emission rates

weighted at twice the waiver MOBILE5a emission rates to produce final emission totals which reflect a reduction to a single waiver per vehicle. The waiver rate, which was four percent for pre-81 model years and three percent for 1981 and later model years, was changed to 1.33 percent and 1.00 percent, respectively.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	0.21	<0.1
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

The provisions of SB 1002 for the one-time waiver were implemented beginning January 1, 1997. Under the authority of SB 1002, the one-time waiver provision was able to be implemented prior to incorporation into a rule. However, for consistency purposes with the statue, ADEQ is currently undergoing a rulemaking to incorporate the provisions for the one-time waiver into current rules.

C. Legal Authority

- S.B. 1002

D. Implementing Agency

Arizona Department of Environmental Quality

E. Schedule and Resources

The measure has been in effect since Gordon-Darby, Inc. modified the software and informational brochures to implement the provisions of the one-time waiver, beginning January 1, 1997.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- The Arizona Department of Environmental Quality continuously monitors the number of vehicles inspected in the Vehicle Emissions Inspection Program, the number of vehicles failing the test, and the improvement in tail pipe emissions after failed vehicles are repaired.
- A.R.S. Section 49-406 (I) and (J).

21. Phased-In Emission Test Cutpoints

Arizona Legislature passed H.B. 2237 in 1997 which contains an appropriation of $120,000 from the State General Fund to the Arizona Department of Environmental Quality to develop and implement an alternative test protocol to reduce the false failure rates associated with the more stringent pass-fail standards for the Vehicle Emissions Testing Program (Section 19 of H.B. 2237).

In 1998, the Arizona Legislature passed S.B. 1427 which requires that vehicles in Area A and B be emissions tested. The vehicles subject to the Vehicle Emissions Inspection Program that have been included within the new boundaries of Area A are required to comply beginning from and after December 31, 1998. The newest five model year vehicles are exempted from the Vehicle Emissions Inspection Program on a rolling basis. Owners of these vehicles are required to pay an in lieu fee equivalent to the price of the test unless they choose to take and pay for an emissions test. The in lieu fees will be deposited into the Arizona Clean Air Fund. S.B. 1427 also allows the Vehicle Emissions Inspection contract to be extended for three additional years (A.R.S. 49-542, 49-543, 49-545 and Section 41 of S.B. 1427).

In addition, the Arizona Department of Environmental Quality will be implementing Interim Test Cutpoints for the Vehicle Emissions Inspection Program until issues are resolved with the final test cutpoints for the I/M 240 Program. The Interim Cutpoints were selected in an attempt to achieve the following failure rates in all three vehicle class categories (Light Duty Gasoline Vehicles, Light Duty Gasoline Trucks 1, and Light Duty Gasoline Trucks 2: 50 percent for Model Years 1981-85; 25 percent for 1986 to 1989 model years, and 10 percent for Model Years 1990-93).

In 1999, the Arizona Legislature passed H.B. 2254 which changes the statutory repeal of the Vehicle Emissions Inspection Program to a sunset provision. According to A.R.S. 41-3009.01, the Vehicle Emissions Inspection Program terminates on January 1, 2009 and Title 49, Chapter 3, Article 5 is repealed on July 1, 2009 (A.R.S. 41-3009.01).

H.B. 2254 also requires each vehicle that is owned by the United States government and that is domiciled in this state for more than ninety consecutive days and each vehicle owned by a state or political subdivision of this state to comply with A.R.S. 49-542. On compliance, the Arizona Department of Environmental Quality will issue a government entity compliance sticker for the vehicle. The government entity compliance sticker will be placed on the vehicle as prescribed by rules adopted by the Department (A.R.S. 49-557).

Collectively, the provisions in H.B. 2254 that apply to the Phased-In Emission Test Cutpoints include A.R.S. 41-3009.01, 49-545 H., 49-557, and Section 7 of H.B. 2254.

A. Modeling Methodology

PM-10 and SO_x: This measure was not modeled for PM-10 or SO_x due to the limitations of the PART5 model.

NO_x: This measure was modeled by the post-processing of emissions using EMSCOR. A December 23, 1997 memo from Sierra Research to the Arizona Department of Environmental Quality titled "Interim Estimates of I/M 240 Program Effectiveness" estimates the effect of several alternative sets of I/M 240 cutpoints on NO_x emission rates. The memo indicated that the there was no quantifiable effect on NO_x emissions from light duty gasoline vehicles (LDGV) or from light duty gasoline trucks 1 (LDGT1). The estimated reduction in emissions of the fleet average light duty gasoline trucks 2 (LDGT2) subject to the I/M 240 program was approximately four tenths percent. The fraction of onroad NO_x emissions from LDGT2s was estimated using MOBILE5a. The fraction of onroad NO_x from LDGT2s was multiplied by the estimated reduction in emissions from affected LDGT2s to estimate the total reduction in NO_x emissions from onroad vehicles. The fractional reduction estimated with this methodology was applied to the UAM-ready onroad emissions using EMSCOR.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	0.04	<0.1
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADEQ has been working with EPA, the current Vehicle Emissions Inspection Program contractor Gordon-Darby, Inc. (GD), and Sierra Research to conduct the necessary research for the development of an appropriate testing methodology for the more stringent pass/fail standards. Sierra Research submitted a draft report recommending the more stringent pass/fail standards and testing methodology to EPA in December 1998. The report is expected to be finalized by March 1999. Once the appropriate pass/fail standards and methodology are finalized, ADEQ rules will be revised to provide for the implementation no later than January 1, 2000.

C. Legal Authority

- Section 19 of H.B. 2237
- A.R.S. 49-542, 49-543, 49-545, 49-557

- Section 41 of S.B. 1427
- AAC Title 18, Chapter 2, Article 10
- A.R.S. 41-3009.1

D. Implementing Agency

Arizona Department of Environmental Quality

E. Schedule and Resources

ADEQ has contracted with GD to perform vehicle emissions testing. In order to implement the more stringent pass/fail standards, GD will modify the software used for vehicle emissions testing to reflect the new testing standards and methodology. Implementation of the new testing methodology will increase the time required for conducting the vehicle emission test and reduce the throughput capacity of the testing network. In order to avoid public dissatisfaction with the testing program, the testing network will be expanded to account of the increased testing times. The software modification, implementation of the testing methodology, and increased network capacity is scheduled for completion by January 1, 2000.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- The Arizona Department of Environmental Quality continuously monitors the number of vehicles inspected in the Vehicle Emissions Inspection Program, the number of vehicles failing the test, and the improvement in tail pipe emissions after failed vehicles are repaired.
- A.R.S. Section 49-406 (I) and (J).

22. Limit Sulfur Content of Diesel Fuel Oil to 500 ppm

Arizona Legislature passed S.B. 1002 in 1996 which prohibits the sale of diesel fuel (including off-road) in the nonattainment area that contains in excess of 500 ppm sulfur. In addition, federal regulations require that on-road diesel fuel sold throughout the contiguous U.S. have a maximum sulfur content of 0.05 percent by weight (500 ppm). These provisions are contained in A.R.S. 41-2083 J.

A. Modeling Methodology

PM-10 and NO_x: This measure was not modeled for PM-10 or NO_x because data on the effect of the sulfur content of diesel fuel on PM-10 and NO_x emissions from diesel nonroad engines were not available.

SO_x: The nonroad emission inventory was grown from the EPA NEVES study. Therefore, the emission rates for nonroad equipment reflect fuels and technology existing at the time of the study, 1990. The PART5 model assumes 2500 ppm for sulfur content of diesel fuel for years prior to 1993. Therefore it was assumed that the nonroad diesel emissions from the NEVES study reflect diesel fuel with a sulfur content of 2500 ppm. It was further assumed that the SO_x emissions from nonroad diesel equipment is proportional to the diesel fuel sulfur content. Accordingly, it was assumed that a reduction from 2500 ppm sulfur to 500 ppm sulfur would result in an 80 percent reduction in SO_x emissions from nonroad diesel equipment.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.2 to nonroad diesel equipment (ASC227000****) for SO_x emissions.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	Not Modeled	Not Modeled
NO_x	Not Modeled	Not Modeled
SO_x	4.8	17.2

B. Enforceable Commitment

The Arizona Department of Weights and Measures began enforcing the Area A 500 ppm diesel fuel sulfur content limitation for onroad and off-road diesel fuel in 1996. Under the authority of S.B. 1002, the sulfur limit requirements were implemented without being incorporated into rule.

C. Legal Authority

- S.B. 1002
- A.R.S. 41-2083(J)

D. Implementing Agency

Arizona Department of Weights and Measures

E. Schedule and Resources

In conjunction with the oxygenated and cleaner-burning gasoline programs, the Department conducts diesel fuel sampling and analysis to ensure the quality of

diesel fuel within Maricopa County and other areas within Arizona. Typically, the Department collects and analyzes approximately 300 samples of diesel fuel statewide.

F. Monitoring and Tracking Program

- The Arizona Department of Weights and Measures collects and analyzes gasoline samples to determine the sulfur levels in the diesel fuel sold or offered for sale in area A.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 (I) and (J).

TABLE V-1

Summary of 2006 Emission Reductions from Committed Control Measures (Average Day Emissions)

Control Measure		PM-10 Reduction MTons/Day	Percent Reduction Total PM-10	NO_x Reduction MTons/Day	Percent Reduction Total NO_x	SO_x Reduction MTons/Day	Percent Reduction Total SO_x
Base Case		210.5		270.5		27.9	
1. Strengthening and Better Enforcement of Fugitive Dust Rules[1]	construction dust	40.16	19.1	----	----	----	----
	trackout paved road dust	20.44	9.7	----	----	----	----
3. Reduce Particulate Emissions from Unpaved Roads and Alleys		12.19	5.8	----	----	----	----
4. Reduce Particulate Emissions from Unpaved Parking Lots		3.73	1.8	----	----	----	----
5. Reduce Particulate Emissions from Vacant Disturbed Lots[2]		1.79	0.9	----	----	----	----
7. PM-10 Efficient Street Sweepers		1.12	0.5	----	----	----	----
8. Curbing, Paving, or Stabilizing Shoulders on Paved Roads[3]		1.03	0.5	----	----	----	----
10. Paving, Vegetating, and Chemically Stabilizing Unpaved Access Points		0.43	0.2	----	----	----	----
11. PM-10 Episode Thresholds		0.07	< 0.1	0.01	< 0.1	< 0.01	< 0.1
12. Restaurant Charbroiler Controls		0.07	< 0.1	----	----	----	----
13. Clean Gasoline (long-term and winter fuel reformulation)		0.03	< 0.1	7.04	2.6	0.37	1.3
15. Pre-1988 Heavy-Duty Diesel Vehicle Standards		0.02	< 0.1	-0.09	< 0.1	< 0.01	< 0.1
16. Coordinate Traffic Signal Systems		< 0.01	< 0.1	0.19	< 0.1	< 0.01	< 0.1
17. National Low Emission Vehicle Program		----	----	14.39	5.3	----	----
18. Tougher Enforcement of Vehicle Registration and Emission Tests		----	----	0.29	0.1	----	----
19. Catalytic Converter Replacement Program		----	----	0.21	< 0.1	----	----
20. One-Time Waiver from Vehicle Emissions Test		----	----	0.21	< 0.1	----	----
21. Phased-In Emission Test Cutpoints		----	----	0.04	< 0.1	----	----
22. Limit Sulfur Content of Diesel Fuel Oil to 500 ppm		----	----	----	----	4.8	17.2

[1] Includes 2. Dust Control Plans for Construction/Land Clearing and Industrial Sites.
[2] Includes 6. Dust Abatement and Management Plans for State Lands.
[3] Includes 9. Reduce Particulate Emissions from Unpaved Shoulders on Targeted Arterials.

CONTINGENCY MEASURES USED FOR NUMERIC CREDIT

Modeling Approaches for Individual Measures

1. Agricultural Best Management Practices

Arizona Legislature passed S.B. 1427 in 1998 which includes Best Management Practices for Agriculture to reduce particulate emissions. The legislation established a Best Management Practices Committee for Regulated Agricultural Activities appointed by the Governor. The Committee is composed of: the Director of the Arizona Department of Environmental Quality; Director of the Arizona Department of Agriculture; Dean of the College of Agriculture of the University of Arizona; State Director of the United States Natural Resources Conservation Service; five people actively engaged in the production of citrus, vegetables, cotton, alfalfa, and grain; and one soil taxonomist from the University of Arizona College of Agriculture. The term of membership is six years and members may be reappointed.

By June 10, 2000, the Best Management Practices Committee will adopt by rule an agricultural general permit specifying best management practices for regulated agricultural activities to reduce PM-10 particulate emissions. The ADEQ Director will then submit the rule to the U.S. Environmental Protection Agency as a revision to the State Implementation Plan within sixty days of adoption. As defined by state law, an agricultural general permit means best management practices that reduce PM-10 particulate emissions from tillage practices and from harvesting on a commercial farm; from those areas of a commercial farm that are not normally in crop production; and from those areas of a commercial farm that are normally in crop production including prior to plant emergence and when the land is not in crop production. Best management practices are defined as techniques verified by scientific research, that on a case-by-case basis are practical, economically feasible and effective in reducing PM-10 particulate emissions from a regulated agricultural activity.

The Best Management Practices Committee will also adopt by rule a list of best management practices, at least one of which will be used to demonstrate compliance with the agricultural general permit no later than December 31, 2001. The legislation acknowledges that the best management practices may vary within the Maricopa PM-10 particulate nonattainment area according to regional or geographical conditions or cropping patterns.

A person engaged in a regulated agricultural activity on the effective date of this act (August 21, 1998) is required to comply with the agricultural general permit by December 31, 2001. A person who begins a regulated agricultural activity after

December 31, 2000 is required to comply with the general permit within eighteen months of beginning the activity.

If the ADEQ Director determines that a person engaged in a regulated activity is not in compliance and has not previously been subject to a compliance order, the Director may serve an order requiring compliance with the general permit and notifying the person of the opportunity for a hearing. The order will specify the nature of the noncompliance and that the person has a period that the Director determines is reasonable, but is not less than six months, to submit a plan that specifies best management practices from among those adopted by rule for the general permit to the Supervisors of the Natural Resources Conservation District (NRCD) in which the person engages in the regulated activity.

However, if the ADEQ Director determines that a person engaged in a regulated activity is not in compliance with the general permit and has previously submitted a plan to the NRCD, the Director may serve an order requiring compliance with the general permit and notifying the person of the opportunity for a hearing. The order will specify the nature of noncompliance and that the person has a period that the Director determines is reasonable, but not less than six months, to submit a plan to the Arizona Department of Environmental Quality that specifies the best management practices from among those adopted for the general permit.

If a person fails to comply with the plan submitted to the Arizona Department of Quality, the ADEQ Director may revoke the agricultural general permit and require that the person obtain an individual permit under 49-426. A revocation becomes effective after the Director has provided the person with notice and an opportunity for a hearing.

Periodically, the Committee may reexamine, evaluate, and modify best management practices. Approved modifications will be submitted to the Environmental Protection Agency. The Committee will also develop and begin an education program by June 10, 2000.

A. Modeling Methodology

PM-10: PM-10 emissions from agricultural sources consist of two categories: (1) windblown dust from the disturbed soil and (2) emissions from harvesting and tilling activities. The analysis of the impact of agricultural best management practices consisted of estimating the impact on these two sources.

A draft version of the ADEQ 24-hour microscale plan indicated that the low end control of windblown emissions from agricultural fields and aprons was expected to be 20 percent, whereas the high end control of windblown emissions from agricultural fields and aprons was expected to be 70 percent. For the regional analysis, the midpoint of this range, 45 percent control, was assumed for windblown

emissions from agricultural fields and aprons. A compliance rate of 80 percent was assumed. Therefore, a net control of 36 percent was assumed.

It was further assumed that one of the agricultural best management practices would be to prohibit high-wind tilling. Most of the assumptions associated with the analysis of eliminating high-wind tilling were obtained from the MAG Most Stringent PM-10 Control Measure Analysis, April 1998, (MSM report). The MSM report indicated that postponing tilling on high-wind days to the next day would reduce high-wind tilling PM-10 emissions by 72 percent. It was further assumed that 15 percent of the tilling in Maricopa County occurs during the high-wind season (March through September). During the high-wind season, 3.7 percent of the days are windy. In addition, a compliance rate of 80 percent was assumed. Therefore it was assumed that the measure would control tilling emissions by 0.32 percent.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A /PROJECT AMS/ packet applied a factor of 0.64 to windblown PM-10 emissions from agricultural land (ASC 2801000000) and a factor of 0.9968 to tilling emissions (ASC 2801000003).

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	4.23	2.0
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

ADEQ, as implementing agency, shall assist the Agricultural Best Management Practices (BMP) Committee to meet the June 10, 2000, deadline to develop (a) a rule containing a list of BMPs to be enforced through a general permit, and (b) an Educational Program for affected sources.

A person engaged in a regulated agricultural activity on the effective date of S.B. 1427 (August 21, 1998) shall comply with the general permit by December 31, 2001. A person who commences a regulated agricultural activity after December 31, 2000, shall comply with the general permit within 18 months of commencing the agricultural activity.

ADEQ shall submit the rule containing a list of BMPs to be enforced through the general permit to the EPA as a revision to the applicable SIP within 60 days of adoption of the rule (approximately August 10, 2000).

C. Legal Authority

- S.B. 1427
- A.R.S. 49-457
- A.R.S. 49-404
- A.R.S. 49-406
- A.A.C. Title 18, Chapter 2, Articles 5 and 6
- Clean Air Act Section 189(b)

D. Implementing Agency

Arizona Department of Environmental Quality
Natural Resource Conservation Districts

E. Schedule and Resources

The proposed rule should be submitted to the Secretary of State's Office in September 1999. Following a public comment period and public hearing, the proposed rule will be submitted to the Governors Regulatory Review Council in March 2000 for approval. ADEQ anticipates submitting the adopted rule to EPA in August 2000.

ADEQ expects to fund the rulemaking process through additional funding to the Clean Air Act Section 105 air quality program grant. When established, the agricultural general permit program will be funded through existing general permit program funds authorized under A.R.S. 49-426(H).

F. Monitoring and Tracking Program

- If it is determined that a person engaged in a regulated agricultural activity is not in compliance with the general permit, and that person has not previously been subject to an ADEQ compliance order, an order stating the particular nature of the noncompliance will be sent to the permitee. That person will then have a reasonable time, but not less than six months, to submit a plan to the supervisors of the Natural Resource Conservation District in which that person's activities arise that details best management practices from those adopted by the rule that the person will utilize to come into compliance with the general permit.
- If a person who is found to be engaged in a regulated agricultural activity is not in compliance with the general permit and has previously submitted a plan for compliance as state above, that person will receive an order from

ADEQ and notice for a hearing on a plan to submit best management practices from those adopted by the rule. If a person then fails to comply with the plan submitted, ADEQ may revoke that person's general permit and require the person to obtain an individual permit.

- The Committee may periodically reexaming, evaluate and modify the list of BMPs. ADEQ shall submit any modifications to EPA as a revision of the State Implementation Plan.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

2. Off Road Vehicle and Engine Standards

Arizona Legislature passed H.B. 2237 in 1997 which requires the Arizona Department of Environmental Quality to adopt rules for air pollution emission standards for off-road vehicles and engines marketed in the State beginning with the 1999 model year. The standards may include the following categories:

a. Heavy duty diesel vehicles rated at 175-750 horsepower.
b. Small utility and lawn and garden equipment engines rated at less than 25 horsepower.
c. Recreational vehicles rated at less than 25 horsepower.
d. Specialty engines and go-carts rated at greater than 25 horsepower.
e. Off-road motorcycles and all terrain vehicles.

The Arizona Department of Environmental Quality is also required to adopt air pollution emission standards for golf cart engines in Maricopa County (A.R.S. 49-542.04).

A. Modeling Methodology

PM-10, NO_x, and SO_x: This measure was modeled in the CNTLEM module of EPS 2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC.

It was assumed that this measure will result in the replacement of nonroad equipment engines with engines meeting new standards at a turnover rate of 14 percent per year for spark-ignition (i.e. two- and four-stroke gasoline) engines and four percent per year for compression-ignition engines (i.e. diesel). It was assumed that the measure takes effect in 2002 for engines affected by this measure. Therefore, by January 2006, there will have been four years of vehicles meeting the new standards sold in the nonattainment area. Accordingly, 56 percent of the spark-ignition engines in the nonattainment area will have emission rates consistent with the new standards and 44 percent of the spark-ignition engines will continue

to emit at the old rate. Sixteen percent of the compression-ignition engines in the nonattainment area will have emission rates consistent with the new standards and 84 percent of the compression-ignition engines will continue to emit at the old rate.

It was assumed that new golf carts are electric and have zero emissions. In addition, new utility equipment engines rated less than 25 horse-power were assumed to emit PM-10 and NO_x at nine percent and 75 percent, respectively, the rate of the current engines. New heavy-duty diesel nonroad engines rated between 175 - 750 horse-power were assumed to emit PM-10 and NO_x at 40 percent and 84 percent, respectively, the rate of their predecessors.

It was assumed that all light commercial equipment and lawn and garden equipment is less than 25 horsepower. All construction, farm, and industrial equipment was assumed to be greater than 25 horsepower, and not affected by this measure. Existing Federal standards for specialty vehicles, go-carts, recreational vehicles, off road motorcycles, and all terrain vehicles could not be found. Therefore, emission reductions from these engine types were not calculated.

A /PROJECT AMS/ packets applied factors of 0.904 and 0.974 to heavy-duty diesel construction equipment (ASC 2270002) to quantify the effect of the new PM-10 and NO_x emission standards, respectively. The /PROJECT AMS/ packets applied factors of 0.49 and 0.858 to spark-ignition utility equipment (ASC 2260006 and 2265006) and spark-ignition lawn and garden equipment (ASC 2260004 and 2265004) for PM-10 and NO_x emissions, respectively. The /PROJECT AMS/ packets also applied factors of 0.854 and 0.959 to compression-ignition utility equipment (ASC 2270006) and compression-ignition lawn and garden equipment (ASC 2270004) for PM-10 and NO_x emissions, respectively. In addition, the /PROJECT AMS/ packet applied a factor of 0.44 to PM-10, NO_x, and SO_x emissions from golf carts (ASC 2260001050, 2265001050). The newly created packets were applied by additional executions of the CNTLEM module after the base case projections and controls had been applied.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	1.01	0.5
NO_x	0.94	0.3
SO_x	0.38	1.4

B. Enforceable Commitment

A rulemaking for the adoption of off-road vehicle and engine standards, which is based on CARB standards, is underway, to be completed by December 1999. The Clean Air Act Section 209(e)(2)(B)(ii) requires standards to be adopted 2 years before the effective date; therefore, the off-road engine standards are anticipated to be effective January 2002.

C. Legal Authority

- H.B. 2237
- A.R.S. 49-542.04

D. Implementing Agency

Arizona Department of Environmental Quality

E. Schedule and Resources

The Arizona Department of Environmental Quality will begin enforcing the CARB off-road standards in January 2002. By then, the Department will evaluate whether the program can be enforced utilizing existing staff or whether additional staff will be necessary for the implementation and enforcement of the program.

F. Monitoring and Tracking Program

- The rules promulgating the California Off-Road Standards will contain recordkeeping and reporting procedures applicable to regulated engine manufacturers, which will be maintained by the Arizona Department of Environmental Quality.

3. Clean Burning Fireplace Ordinance

Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to adopt, implement and enforce an ordinance that complies with the clean burning fireplace standards adopted by the Metropolitan Planning Organization that is responsible for air quality planning in Area A by December 31, 1998. The ordinance must prohibit the installation or construction of a fireplace or wood stove unless it is one of the following:

1. A fireplace that has a permanently installed gas or electric log insert.

2. A fireplace, a wood stove or any other solid fuel burning appliance that is any of the following:

(a) Certified by the U.S. Environmental Protection Agency as in compliance with 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

(b) A wood stove tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those in 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

(c) Determined by the County Air Quality Control Officer to meet performance standards equivalent to those in 40 Code of Federal Regulations Part 60, Subpart AAA in effect on July 1, 1990.

3. A fireplace that has a permanently installed wood stove insert that complies with paragraph 2, subdivision (a), (b) or (c) of this section.

The ordinance is required to prohibit the subsequent conversion or alteration of a permitted fireplace or wood stove to a nonpermitted use. The ordinance may provide for exemptions from regulation for heating or industrial equipment, cooking devices and outdoor fireplaces. The state income tax subtraction of $500 dollars for the purchase and installation of a qualified wood stove, wood fireplace or gas fired fireplace and non-optional equipment is removed. The subtraction of $500 dollars for the conversion of an existing wood fireplace to a qualified fireplace is retained.

A county that contains any portion of Area A that has a population of less than 1,200,000 according to the most recent U.S. decennial census shall adopt, implement, and enforce the ordinance only in those portions of the county which are located in Area A (A.R.S. 9-500.16 and 11-875).

A. Modeling Methodology

PM-10, NO_x, and SO_x: This measure was modeled in the CNTLEM module of EPS 2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC.

It was assumed that this measure will be implemented in 1999. It was further assumed that all newly constructed residential fireplaces and all newly installed residential wood stoves will be "low-emitters" or EPA-certified Phase II or equivalent. Based on the 1996 MAG Residential Wood Combustion Survey, 28 percent of residences have fireplaces and one percent have wood stoves. Fireplace and wood stove population estimates were derived by combining the aforementioned percentages with the estimated number of residences in the PM-10 Nonattainment Area. These 1994 population estimates were projected to the years 1998 and 2006 to determine the number of new fireplaces and wood stoves constructed in 1999

through 2006. All fireplaces constructed from 1999 through 2006 were assumed to be EPA certified fireplaces. All wood stoves installed from 1999 through 2006 were assumed to be EPA-certified Phase II or equivalent stoves.

Based on these assumptions, it was estimated that fireplace and wood stove emissions could be reduced to 90 percent and 92 percent, respectively, of the base case total for PM-10. NO_x emissions from fireplaces and wood stoves could be reduced to 96 percent and 97 percent, respectively, of the base case total. There was no difference in Sox emissions rates between the existing and clean burning equipment.

A /PROJECT AMS/ packet applied factors of 0.899 (PM-10), 1.000 (SO_x), and 0.958 (NO_x) to fireplaces (ASC 2104008001), and 0.922 (PM-10), 1.000 (SO_x), and 0.970 (NO_x) to wood stoves (ASC 2104008010). The newly created packet was applied by an additional execution of the CNTLEM module after the base case projections and controls were applied.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.12	<0.1
NO_x	<0.01	<0.1
SO_x	0	0

B. Enforceable Commitment

In addition to the State Law requiring Maricopa County and all 22 cities and towns in Area A to adopt and implement a Clean Burning Fireplace Ordinance, Maricopa County and 17 jurisdictions to date have submitted commitments for the Serious Area PM-10 Plan to implement this measure on or before December 31, 1998.

C. Legal Authority

- S.B. 1427
- A.R.S. 9-500.16 and 11-875
- A.R.S. 9-240

D. Implementing Agency

Local Jurisdictions

E. Schedule and Resources

State Law requires this measure to be adopted and implemented by December 31, 1998. Maricopa County and 17 cities and towns have indicated in their formal commitments that existing resources are adequate to implement this measure.

F. Monitoring and Tracking Program

- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

4. Additional Dust Control Measures (City of Tempe Commitment)

City of Tempe, in 1997, indicates that earlier this year, construction began on the Rio Salado Development, which will ultimately improve approximately 4.5 miles of the dry Salt River bed and adjacent properties. Included in this project is the construction of a two mile long lake, which is due to be completed in 1999. The Salt River and the properties adjoining its banks constitute the largest unimproved portion of land remaining within Tempe.

City of Tempe, in 1998, indicates that last year, construction began on the Rio Salado Development, which will ultimately improve the dry Salt River bed and adjacent properties in Tempe. Included in this project is the construction of a two mile long lake which is due to be completed in 1999.

A. Modeling Methodology

PM-10: The high-wind inventory contains windblown PM-10 emissions from fluvial channels. Dry river bottoms serve as a source for suspendable PM-10 on windy days. The City of Tempe has indicated that the Rio Salado Project will cover 4.5 miles. This area will be covered with water and vegetation, thereby eliminating a large source of suspendable PM-10.

By 1999 two miles of the project will be complete. The final project will be 4.5 miles. The City of Tempe staff indicated that the two mile section would cover 220 acres. Therefore, it was assumed that 4.5 mile section would cover 495 acres of fluvial channel in 2006. There are 23,239 acres of fluvial channel in the base case inventory. Since the emissions from fluvial channels is proportional to the acreage of fluvial channels, removal of 495 acres of fluvial channel in 2006 would result in an 2.1 percent reduction (495/23,239) in fluvial channel emissions.

This measure was modeled in the CNTLEM module of EPS2.0. The CNTLEM module is capable of applying a reduction factor to emissions by ASC. A

/PROJECT AMS/ packet applied a factor of 0.979 to fluvial channels (ASC 2740030010) for PM-10 emissions.

NO_x and SO_x: This measure was not modeled for NO_x and SO_x impacts because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.07	<0.1
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

The City of Tempe has submitted commitments to implement various additional dust control measures.

C. Legal Authority

- A.R.S. 9-240

D. Implementing Agency

City of Tempe

E. Schedule and Resources

Implementation of this measure is ongoing. Funding for this measure is allocated through the normal budgeting process of the city.

F. Monitoring and Tracking Program

- The city will track progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

5. Additional Dust Control Measures (City of Phoenix Commitment)

The City of Phoenix has identified additional options for control of PM-10 emissions in the area of 19th Avenue and Lower Buckeye Road. These include: (1) a one-year pilot program to offer reduced fees/assessment to property owners who form improvement districts to pay for paving unpaved roads, (2) funding to pave and stabilize unpaved shoulders and streets, (3) installation of dust control at landfills, including a pavement and a sprinkler system for the mulch processing area at the 27th Avenue Landfill, increased frequency of sweeping at the Skunk Creek and 27th Avenue Landfills; asphalt millings on service roads at the 19th Avenue and 27th Avenue Landfills, and a water truck and tower for the Skunk Creek Landfill, and (4) increasing the frequency of residential street sweeping to match the uncontained trash pick-up schedule.

A. Modeling Methodology

PM-10: This measure was modeled through post-processing. It was assumed that landfill emissions were controlled through paving and a sprinkler system for the mulch processing area at the 27th Avenue Landfill, application of asphalt millings on service roads at the 19th and 27th Avenue Landfills, and a water truck and tower for the Skunk Creek Landfill. It was assumed that these activities were equivalent to paving 5.3 acres. A Sierra Research Study, "Particulate Control Measure Feasibility Study: Final Report", estimated that paving an acre reduces PM-10 fugitive dust emissions by 11.9 pounds per day. The net PM-10 reduction estimated for these activities is 63.5 pounds per day, which equates to 28.8 kilograms per day, or 0.03 metric tons per day.

Other portions of this measure, the one-year pilot program to offer reduced fees/assessments to property owners forming improvement districts and funding to pave and stabilize unpaved shoulders and streets, ~~was~~ were modeled by reducing three miles of unpaved roads in the grid cell containing 19th Avenue and Lower Buckeye Road. The net PM-10 reduction estimated for these activities is 6.9 kilograms per day or .007 metric tons per day.

The additional dust control measures implemented by the City of Phoenix to increase the frequency of street sweeping at the Skunk Creek and 27th Avenue Landfills and match the uncontained trash pick-up schedule in the residential areas near 19th Avenue and Lower Buckeye Road were considered to be part of the measure, Frequent Routine Sweeping or Cleaning of Paved Roads, which is described below.

The combined PM-10 emission reductions attributable to the City of Phoenix Additional Dust Control Measures is 0.04 metric tons per day.

No_x, and SO_x: This measure was not modeled for NO_x and SO_x because it is intended to control particulate matter.

Pollutant	Estimated Reduction in Emissions in the Year 2006	
	Metric Tons Per Day	Percent
PM-10	0.04	<0.1
NO_x	Not Modeled	Not Modeled
SO_x	Not Modeled	Not Modeled

B. Enforceable Commitment

The City of Phoenix has submitted commitments to implement various additional dust control measures.

C. Legal Authority

- A.R.S. 9-240

D. Implementing Agency

City of Phoenix

E. Schedule and Resources

Implementation of this measure is ongoing. Funding for this measure is allocated through the normal budgeting process of the city.

F. Monitoring and Tracking Program

- The city will track progress made with the implementation of this measure.
- The Maricopa County Environmental Services Department determines reasonable further progress, and reviews the implementation status of the various measures contained in the air quality plans on an annual basis.
- A.R.S. Section 49-406 I. and J.

TABLE V-2

Summary of 2006 Emission Reductions from Committed Contingency Measures (Average Day Emissions)

Control Measure	PM-10 Reduction MTons/Day	Percent Reduction Total PM-10	NO_x Reduction MTons/Day	Percent Reduction Total NO_x	SO_x Reduction MTons/Day	Percent Reduction Total SO_x
Base Case	210.5		270.5		27.9	
1. Agricultural Best Management Practices	4.23	2.0	----	----	----	----
2. Off-Road Vehicle and Engine Standards	1.01	0.5	0.94	0.3	0.38	1.4
3. Clean Burning Fireplace Ordinance	0.12	< 0.1	< 0.01	< 0.1	0	0
4. Additional Dust Control Measures (City of Tempe)	0.07	< 0.1	----	----	----	----
5. Additional Dust Control Measures (City of Phoenix)	0.04	< 0.1	----	----	----	----

MEASURES WHICH IMPROVE AIR QUALITY, BUT WERE NOT USED FOR NUMERIC CREDIT

Descriptions of Individual Measures

1. Enhanced Emission Testing of Constant Four-Wheel Drive Vehicles

   Arizona Legislature passed S.B. 1427 in 1998 which requires motor vehicles, including constant four-wheel drive vehicles, manufactured in or after Model Year 1981, with a gross vehicle weight rating of 8,500 pounds or less, other than diesel powered vehicles, to take and pass a transient load emissions test (I/M 240). Previously, constant four-wheel drive vehicles were required to pass a curb idle emissions test (A.R.S. 49-542).

2. Increased Waiver Repair Limit Options

   Arizona Legislature passed S.B. 1427 in 1998 which increases the amount a person must spend to repair a failing 1967-1974 vehicle in Area A to qualify for a waiver. The increased amount is $200 rather than the previous $100 (A.R.S. 49-542).

3. Gross Polluter Option for I/M Program Waivers

   Arizona Legislature passed S.B. 1427 in 1998 which requires that in order to obtain a waiver from compliance with the Vehicle Emissions Inspection Program, the owner of a vehicle emitting more than twice the emission standard has to repair the vehicle sufficiently to reduce the emission levels to less than twice the standard (A.R.S. 49-542).

4. Vehicle Repair Grant Program

   Arizona Legislature passed S.B. 1427 in 1998 which appropriates $275,000 from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 to improve the utilization of the Vehicle Repair Grant Program and to implement the Catalytic Converter Replacement Program. The Vehicle Repair Grant Program also applies to Area A (Section 39 of S.B. 1427).

5. Voluntary Vehicle Repair and Retrofit Program

   Arizona Legislature passed S.B. 1427 in 1998 which requires Maricopa County to establish and coordinate a Voluntary Vehicle Repair and Retrofit Program in Area A. The County is required to coordinate the program with the Arizona Department of Environmental Quality and Arizona Department of Transportation. The program is required to begin by January 1, 1999 and provide for quantifiable emissions reductions based on actual emissions testing performed on the vehicle before repair and retrofit.

A vehicle owner may participate in the program if all of the following criteria are met: 1. The owner is willing to participate in the program. 2. The vehicle is functionally operational. 3. The vehicle has been titled in this state and registered in Area A for at least twenty-four months. 4. The vehicle is at least twelve years older than the current model year passenger car or light duty truck. 5. The vehicle fails the emissions test. It is important to note that vehicles that are not required to take the emissions inspection test are not eligible to participate in the program.

The County is required to develop a Pilot Emissions Control Repair and Retrofit Program in cooperation with the ADEQ that has the following provisions:

1. Vehicle owners who qualify for the repair and retrofit program will pay the first $100 as a co-payment.

2. Vehicle owners that require more than $500 in repair costs or $650 in retrofit parts and labor costs are not eligible unless the vehicle owner chooses to pay additional costs.

Diesel powered motor vehicles with a gross vehicle rating of more than 8,500 pounds that are registered in Area A which fail any random roadside vehicle test conducted by the State are eligible for up to $1,000 in repair or retrofit costs from the program. Qualified vehicle owners will be responsible for one-half of the costs of the qualified repairs and the other one-half of the costs will be funded from the program up to $1,000. No more than 20 percent of the program funds in any year may be used for these purposes.

S.B. 1427 also establishes a Voluntary Vehicle Repair and Retrofit Program Fund consisting of monies appropriated by the Legislature and political subdivisions and gifts, grants, and donations. S.B. 1427 includes an appropriation of $800,000 from the State General Fund in fiscal year 1998-1999 for the Voluntary Vehicle Repair and Retrofit Program Fund.

The County Board of Supervisors is required to appoint an advisory committee composed of representatives from the Arizona Department of Transportation, Arizona Department of Environmental Quality, and the parties affected by the Voluntary Vehicle Repair and Retrofit Program, including automobile hobbyists and the automotive after-market products industry. The role of the committee is to advise and make recommendations on the development and implementation of the program.

By December 1 of each year, the County is required to prepare a report on the Voluntary Vehicle Repair and Retrofit Program that includes the number of vehicles repaired or retrofitted by model year, the cost effectiveness of the program in terms of dollars spent per ton of vehicle emissions reductions, any recommendations for improving the effectiveness of the program, and the administrative costs of the

program. The report is required to be submitted to the Arizona Department of Environmental Quality, Arizona Department of Transportation, Speaker of the House of Representatives, President of the Senate, Governor, Secretary of State, and Director of the Arizona Department of Library, Archives, and Public Records (A.R.S. 49-474.03 and Section 34 and 36 of S.B. 1427).

6. Random Roadside Testing of Diesel Vehicles

Arizona Legislature passed S.B. 1427 in 1998 which requires the Arizona Department of Environmental Quality to implement a pilot random roadside emissions testing program for diesel vehicles over 8,500 pounds using the snap acceleration test developed by the Society of Automotive Engineers (J 1167). This program will not be implemented unless the Directors of the Arizona Department of Transportation and Arizona Department of Public Safety agree that the program can be conducted safely and in compliance with federal regulations relating to interstate travel and safety.

If the program is implemented by November 15, 1999, the ADEQ Director will report on the results of the pilot program, including pass and fail rates, the nature of the registration of the failing vehicles, the extent of noncompliance of the failing vehicles, and recommendations for implementation of a permanent program. The report will be transmitted to the Governor, Speaker of the AZ House of Representatives, and President of the AZ Senate (Section 35 of S.B. 1427).

7. Snap Acceleration Test for Heavy-Duty Diesel

Arizona Legislature passed S.B. 1002 in 1996 which requires that beginning March 1, 1997, a diesel powered motor vehicle applying for registration or reregistration in Area A more than 33 months after the date of initial registration shall be required to take and pass an annual emissions test conducted at an official emissions inspection station or a fleet emissions inspection station as follows:

- a loaded, transient or any other form of test as provided for in rules adopted by the Director for vehicles with a gross vehicle weight rating of 8,500 pounds or less.

- a test that conforms with the Society of Automotive Engineers Standard J1667 for vehicles with a gross vehicle weight rating of more than 8,500 pounds (A.R.S. 49-542 F.2.(d).).

8. Short-Term Reformulation: June 1, 1998 - September 30, 1998

Arizona Legislature passed H.B. 2307 in 1997 which contains requirements for the sale of gasoline for June 1998 - September 30, 1998 in Area A, subject to an

appropriate waiver granted under Section 211 (c)(4) of the Clean Air Act, that meets the following fuel reformulation options:

- California Phase 2 Reformulated Gasoline, including alternative formulations allowed by the predictive model, as adopted by the California Air Resources Board pursuant to the Californian Code of Regulations, Title 13, Sections 2261 through 2262.7 and 2265, in effect on January 1, 1997, that meets the maximum 7.0 pound per square inch (psi) summertime vapor pressure requirements in A.R.S. Section 41-2083, Subsection F.

- Gasoline that meets the standards for Federal Phase I Reformulated Gasoline, as provided in 40 CFR Section 80.41, paragraphs (a) through (h), in effect on January 1, 1997, that meets the maximum 7.0 psi summertime vapor pressure requirement in A.R.S. Section 41-2083, Subsection F.

9. Diesel Fuel Sampling and Reporting

Arizona Legislature passed S.B. 1427 in 1998 which requires that beginning on January 1, 1999 through July 1, 1999, gasoline refiners and other suppliers of diesel fuel that is supplied or sold as a final product for the fueling of diesel vehicles within Area A report to the Director of the Arizona Department of Weights and Measures on the quantity and quality of diesel fuel shipped to Maricopa County during the preceding month. The report is required to include by batch, the sulfur content, aromatic hydrocarbon content, cetane number, specific gravity, American Petroleum Institute gravity, and the temperatures at which ten percent, fifty percent, and ninety percent of the diesel fuel has boiled off during distillation. The report is due on the fifteen day of each month.

In addition, the report must contain a certification of truthfulness and accuracy of the data submitted. By October 1, 1999, the Director of the Arizona Department of Weights and Measures is required to report the results of the six month sampling and reporting period to the Director of the Arizona Department of Environmental Quality, Governor, Speaker of the Arizona House of Representatives and President of the Arizona Senate (Section 40 of S.B. 1427).

10. Alternative Fuel Vehicles for Local Governments and School Districts, and Federal Government/Low Emission Vehicle Requirements

Arizona Legislature passed S.B. 1427 in 1998 which establishes additional requirements for vehicles owned by cities and towns, and counties in Area A. These provisions also apply to bus fleets operated by the cities, towns, and Regional Public Transportation Authority; school districts with a membership of more than 3,000 located within or which has bus routes running within Area A; the issuance of tax credits or subtractions for alternative fuel vehicles authorized by

state law; and the federal government fleets. At a minimum, the alternative fuel vehicles are required to comply with any one of the following:

1. The U.S. Environmental Protection Agency Standards for Low Emission Vehicles pursuant to 40 Code of Federal Regulations Section 88.104-94 or 88.105-94.

2. The vehicle engine is certified by the engine modifier to meet the Addendum to Memorandum 1-A of the U.S. Environmental Protection Agency, as printed in the Federal Register, Volume 62, Number 207, October 27, 1997, pages 55635-55637.

3. The vehicle engine is the subject of a waiver for that specific engine application from the U.S. Environmental Protection Agency's Addendum to Memorandum 1-A requirements and that waiver is documented to the reasonable satisfaction of the Department of Commerce Energy Office.

The cities, counties, and school districts which have been included within the boundaries of Area A are required to comply with the provisions of A.R.S. 9-500.04 C. through G., 15-349, and 49-474.01 C. through E. relating to the conversion of fleet vehicles to alternative fuels according to the following schedule:

1. At least 18 percent of the total fleet by December 31, 2000.

2. At least 25 percent of the total fleet by December 31, 2001.

3. At least 50 percent of the total fleet by December 31, 2003.

4. At least 75 percent of the total fleet by December 31, 2005.

These provisions do not apply to cities and towns with a population of less than 7,500 according to the most recent U.S. decennial census and that lie outside Area A. Also, S.B. 1427 authorizes that monies in Arizona Clean Air Fund may be used for a public awareness program for alternative fuels. An accounting of the Arizona Clean Air Fund expenditures are to be included in the annual report to the Legislature on the fund activities (A.R.S. 9-500.04, 15-349, 41-1516, 49-474.01, 49-573 and Section 42 of S.B. 1427).

In 1999, the Arizona Legislature passed H.B. 2254 which requires an operator of a United States government owned vehicle fleet based primarily in this state that does not comply with the statutory timetable and percentage goals for alternative fuel vehicles to file a report with the Arizona Department of Commerce Energy Office, the House of Representatives Federal Mandates and States' Rights and Environment Committees, or their successor committees, and the Senate Government and Environmental Stewardship and Commerce, Agriculture and

Natural Resources Committees, or their successor committees. The report will include the total number of vehicles in the operator's fleet by class and the percentage that is capable of operating on alternative fuel. The operator is required to file the report on or before October 1, 1999, April 1, 2000 and October 1, 2000.

An operator of a fleet that does not file a report as prescribed will not operate a vehicle in Area A as defined in A.R.S. 49-541 ninety days after the reporting date. Once an operator of a fleet files the report, this subsection will not apply (A.R.S. 49-573 D. and E.).

11. Alternative Fuel Vehicles for State Government/Low Emission Vehicle Requirements

Arizona Legislature passed S.B. 1269 in 1998 which requires the Director of the Arizona Department of Administration (DOA) to appoint a State Motor Vehicle Fleet Alternative Fuel Coordinator to develop, implement, document, monitor and modify as necessary a Statewide Alternative Fuels Plan in consultation with all state agencies and departments that are subject to the alternative fuel requirements. Specifically, the plan is to include the agencies currently exempt from the state fleet alternative fuel conversion requirements (Arizona Department of Public Safety, Arizona Department of Corrections, Universities and Community Colleges, and Arizona State School for the Deaf and the Blind). These agencies are to submit their programs for alternative fuels and fuel economy to the Coordinator.

The Coordinator is required to approve all vehicle acquisitions by the state and assume several functions of the Director relating to the acquisition of alternative vehicle fuel (AFVs) refueling facilities, the development of the vehicle fleet energy conservation plan and the identification of the appropriate AFVs for each state agency. The legislation requires an increasing percentage of new state vehicles weighing less than 8,500 pounds purchased for operation in Maricopa and Pima counties, including all of the agencies exempted from the DOA fleet, to be capable of operating on alternative fuels. The schedule is as follows:

- 10 percent of all 1997 model years purchased
- 15 percent of all 1998 model years purchased
- 25 percent of all 1999 model years purchased
- 50 percent of all 2000 model years purchased
- 75 percent of all 2001 model years purchased

In addition, S.B. 1269 requires an increasing percentage of the AFVs weighing less than 8,500 pounds purchased for operation in Maricopa County to comply with the Environmental Protection Agency's standards for Low Emission Vehicles (LEVs) starting in model year 2000. The schedule is as follows:

- 40 percent of model year 2000 AFVs
- 50 percent of model year 2001 AFVs
- 60 percent of model year 2002 AFVs
- 70 percent of model year 2003 AFVs

Other provisions in S.B. 1269 include a deadline of December 31, 1999, for the Arizona Department of Administration to convert 40 percent of the DOA administered state fleet to alternative fuels. Fire suppression vehicles are excluded from the alternative fuel conversion requirements for the state fleet. For state agencies that use alcohol fueled AFVs, it must be demonstrated to the Director of DOA that the fuel for the vehicle is available within a ten mile radius of the primary home base for that vehicle.

Regarding reporting requirements, all state agencies, including those exempted from the state fleet, are required to report annually to the Director of DOA on vehicle costs, operation, maintenance, mileage and any other information that the Director deems necessary for the submittal of the annual report to the Legislature and the Governor. The Director of the DOA is required to submit an annual report to the Legislature, the Governor and each of these branches budget offices that provides information about the state fleet including detailed information regarding the conversion of the fleet to alternative fuels (A.R.S. 28-5805 and 41-803).

12. Alternative Fuel Vehicle and Equipment Tax Incentives/Low Emission Vehicle Requirements

Arizona Legislature passed H.B. 2237 in 1997 which extends the existing individual and corporate tax credit for the purchase or conversion of an alternative fuel vehicle or the purchase of an alternative fuel delivery system through 2001 and expands the tax credit to include minimum three year leases of an alternative fuel vehicle. It also increases the tax credit to $1,000 from $500 in 1997 and $250 in 1998 (A.R.S. 43-1086).

In 1998, the Arizona Legislature passed S.B. 1269 which provides a variety of tax incentives and financial assistance to encourage the use of alternative fuel vehicles (AFVs). The definition of alternative fuel is expanded to included an emulsion of water-phased hydrocarbon fuel that contains at least 20 percent water and that complies with one of three specified EPA standards and in combination of at least 70 percent alternative fuel and not more than 30 percent petroleum-based fuel for an engine that meets an equivalent of the EPA Low Emission Vehicle (LEV) standard.

The following tax incentives are provided in the bill:

1. AFV's and alternative fuel conversion equipment are exempt from the retail and personal property rental classifications and use taxation.

2. Corporate and individual income taxpayers are authorized to take both the AFV and equipment subtraction and credits for AFVs and equipment, as well as obtain a grant from the Arizona Clean Air Fund.

3. Individual and corporate income tax credits for tax years 1998 through 2001 are increased from $1,000 to $2,000 for the purchase, lease, or conversion of a dedicated AFV or purchase of a dedicated alternative fuel delivery system. The maximum credit for a bi-fueled AFV remains at $1,000.

4. Nonrefundable individual and corporate income tax credits for tax years 1998 through 2001 are authorized for expenses associated with constructing or operating an alternative fuel fueling station. The amount of the credit for a public-accessible station or a station dispensing renewable fuel is 50 percent of the costs incurred, up to $400,000. For other stations, the credit is the lesser of 25 percent of the costs incurred or $200,000.

5. The maximum corporate income tax subtraction for the purchase of a new AFV is increased from $5,000 to $10,000. This becomes effective for taxable years after December 31, 1997.

6. The maximum corporation income tax subtraction for the conversion to an AFV is increased from $3,000 to $5,000. This becomes effective for taxable years after December 31, 1997.

7. Nonrefundable individual and corporate tax credits are authorized for the purchase or lease (for at least three years) of original equipment manufactured AFVs. For tax years 1999 through 2011, the amount of credit ranges from 50 to 90 percent of the incremental cost above the cost of a conventionally fueled vehicle, based on the emissions levels of the AFV. For tax years 2012 through 2019, the amount of credit ranges from 25 to 75 percent of the incremental cost above the cost of a conventionally fueled vehicle, based on the emissions levels of the AFV.

8. Grants from the Arizona Clean Air Fund (ACAF) are made available for AFVs purchased or leased and the amount of the grant is increased from $1,000 to $2,000.

Passed by the Arizona Legislature in 1998, S.B. 1427 tax credits or subtractions for alternative fuel vehicles authorized by state law will only be allowed if the vehicle meets one of the following:

1. The vehicle is certified to meet at a minimum the U.S. Environmental Protection Agency Low Emission Vehicle Standard pursuant to 40 Code of Federal Regulations Section 88.104-94 or 88.105-94.

2. The vehicle meets the requirements of the Addendum to Memorandum 1-A, issued by the U.S. Environmental Protection Agency, as printed in the Federal Register, Volume 62, Number 207, October 27, 1997, pages 55635-55637.

3. The vehicle is the subject of a waiver for that specific engine application from the U.S. Environmental Protection Agency's Memorandum 1-A requirements and that waiver is documented to the reasonable satisfaction of the Department of Commerce Energy Office (A.R.S. 1-215, 41-1516, 42-5061, 42-5071, 42-5159, 43-1026, 43-1086, 43-1128.01, and 43-1174).

13. Public Awareness Program for Alternative Fuels

Arizona Legislature passed S.B. 1427 in 1998 which allows monies from the State Clean Air Fund to be used to conduct public awareness programs for alternative fuels (A.R.S. 41-1516).

14. Voluntary Gasoline Vehicle Retirement Program/Maricopa County Travel Reduction Program

Maricopa County is in the process of revising its Trip Reduction Ordinance to include voluntary vehicle trade-outs. The proposed revisions will allow trade-outs that have been completed after October 16, 1996 to be used to achieve the emission reduction goals established under the ordinance. This measure is assumed to be a mechanism for implementation of the Trip Reduction Program goals.

15. Oxidation Catalyst for Heavy Duty Diesel Vehicles

Arizona Legislature passed H.B. 2237 in 1997 which requires cities, towns, Maricopa County, school districts, the state and the federal government to install a technology (oxidation catalyst) on their heavy duty diesel vehicles if the entities receive a waiver to opt out of the alternative fuel requirements for fleets. The heavy duty diesel vehicles with a gross vehicle weight of 8500 pounds or more manufactured in or before model year 1993 would have the catalyst installed based upon the following time schedule in A.R.S. 49-555:

a. 25 percent of the diesel fleet vehicles by December 31, 1998.
b. 40 percent of the diesel fleet vehicles by December 31, 1999.
c. 60 percent of the diesel fleet vehicles by December 31, 2000.
d. 80 percent of the diesel fleet vehicles by December 31, 2001.
e. 100 percent of the diesel fleet vehicles by December 31, 2002.

The technology is to be effective at reducing particulate emissions by at least 25 percent and be approved by the Environmental Protection Agency pursuant to the

Urban Bus Engine Retrofit/Rebuilt Program. This measure applies to Area A which is generally the nonattainment area (A.R.S. 9-500.04, 15-349, 41-803, 49-474.01, 49-573 and 49-555).

16. Mass Transit Alternatives

Many cities are pursuing a variety of mass transit alternatives. These include feasibility studies to evaluate the need and general location for high-capacity transit corridors throughout the metropolitan area, efforts to obtain Federal assistance for high-capacity rail transit and plans for local taxes to support expanded transit service.

17. Develop Intelligent Transportation Systems

A number of jurisdictions have identified programs to apply new technology to produce more efficient use of existing transportation facilities, often termed Intelligent Transportation Systems (ITS). A key element of these efforts is the ongoing freeway management system (FMS). Another major program is the AZTech Intelligent Transportation System Model Deployment Initiative, scheduled to implement a number of ITS projects for the region by 1998. An important element of the AZTech program involves enhancing traffic signal coordination between jurisdictions. In addition, real time travel information on the location of 88 buses will be provided to transit riders at the Phoenix Central Station with additional electronic signs planned for Scottsdale and Mesa.

18. Special Event Controls-Required Implementation from List of Approved Strategies

Several cities are evaluating options for managing parking and traffic associated with special events. An important aspect is the linkage of reducing vehicular congestion with alternative modes of travel.

19. Voluntary Lawn Mower Emissions Reduction Program

Arizona Legislature passed H.B. 2237 in 1997 which requires Maricopa and Pima Counties to establish a Voluntary Lawn Mower Emissions Reduction Program to begin no later than July 1, 1998. A lawn mower owner may participate in the program if the lawn mower starts and is used for commercial or residential purposes. The voucher for retired commercial lawn mowers is $200 and must be used for the purchase of a lawn mower that generates lower emissions. The voucher for retired residential lawn mowers is $100 and must be used for the purchase of an electric lawn mower. Retired lawn mowers are prohibited from use in Arizona.

In order to fund this program, H.B. 2237 establishes the Voluntary Lawn Mower Emissions Reduction Fund consisting of monies appropriated by the Legislative and

political subdivisions along with gifts, grants and donations. The Counties are required to prepare and submit a progress report on December 1 of each year which describes the number of lawn mowers retired by brand and year of manufacture; cost effectiveness of the program in terms of dollars spent per ton of emissions reductions; recommendations for improving the effectiveness of the program; and administrative costs of the program (A.R.S. 49-474.02).

The bill also contains a $1,000,000 appropriation for the State General Fund for fiscal year 1997-1998 for deposit into the Voluntary Lawn Mower Emission Reduction Fund (Section 21 of H.B. 2237).

In 1998, the Arizona Legislature passed S.B. 1427 which expanded the program to include garden equipment as well as lawn mowers. The bill specifies that a voucher will be issued in the amount of $50 to the owner of a gasoline powered lawn or garden device that is retired. The voucher must be used for the purchase of a lawn or garden device that generates lower emissions. Retired equipment is prohibited in the state. In addition to lawn mowers, the progress report due from the counties on December 1 of each year must include garden equipment. The bill also contains an appropriation of $500,000 in FY 1998-1999 and $500,000 in FY 1999-2000 (A.R.S. 49-474.02 and Section 36 of S.B. 1427).

Maricopa County indicates that this measure involves implementing a voluntary program to purchase and retire commercial and residential lawn mowers which produce excessive emissions. This measure will be implemented by the Maricopa County Environmental Services Department, Community Service Division. Legal Authority for this action is provided under Section 49-474.02 of the Arizona Revised Statutes.

The Maricopa County Community Services Division is currently in the developmental stages of program implementation.

July 1997, Define program parameters
July 1997, Develop RFP for Vendors
August 1997, Issue RFP for Vendors
October 1997, Select Vendor
October 1997, Finalize paperwork
November 1997, Program implementation

Personnel will be provided through existing staff. The sum of $1,000,000 has been appropriated from the state general fund to be split among counties with a population of more than 500,000 persons.

20. Encourage the Use of Temporary Electrical Power Lines Rather than Portable Generators at Construction Sites

A number of local governments are taking steps to begin implementing this measures. Efforts include providing information brochures to developers, adjusting electrical codes, identifying reusable equipment, and conducting pilot projects.

21. Defer Emissions Associated with Government Activities

A number of jurisdictions have identified their intent to pursue methods for deferring emissions out of critical air pollution periods. These activities include restructuring use of two-cycle gasoline-powered lawn and garden maintenance equipment after 2:00 p.m. placing requirements on maintenance contractors, and encouraging employees to limit vehicle idling and other activities which may contribute to air pollution during critical periods.

22. Public Information Program on Wood Stoves and Wood Heat

Maricopa County, which was identified as the suggested implementing agency, is continuing the implementation of the public information and education program to inform and educate citizens about issues pertaining to woodburning. The program includes two hotlines, fax notifications of high air pollution advisories, information sheets, and newspaper articles. Maricopa County also indicated that it will post High Pollution Advisories on the Maricopa County Environmental Services Home Page and distribute educational brochures to promote clean-burning fireplaces. This measure is assumed to be a mechanism for implementing the Residential Woodburning Restriction Ordinance which is reflected in the base emission inventories.

23. Encourage Limitations on Vehicle Idling

Regional Public Transportation Authority (RPTA) updated its engine idling policy in June 1996. The RPTA will continue to work with member jurisdictions to promote environmentally sensitive transit operations practices and policies. Promoting vehicle idling limitations and other environmentally sensitive transit operations practices and policies are included within the ongoing annual budgets of the RPTA and its member jurisdictions.

24. Expansion of Area A Boundaries

Arizona Legislature passed S.B. 1427 in 1998 which expands the boundaries of Area A. Previously, the Area A boundaries followed the boundaries of the carbon monoxide and ozone nonattainment areas. Area A was expanded to include additional portions of Maricopa County, portions of Pinal County, and portions of Yavapai County. The Area A boundaries are delineated as follows:

(a) In Maricopa County:
Township 8 North, Range 2 East and Range 3 East
Township 7 North, Range 2 West Through Range 5 East
Township 6 North, Range 2 West Through Range 6 East
Township 5 North, Range 2 West Through Range 7 East
Township 4 North, Range 2 West Through Range 8 East
Township 3 North, Range 2 West Through Range 8 East
Township 2 North, Range 2 West Through Range 8 East
Township 1 North, Range 2 West Through Range 7 East
Township 1 South, Range 2 West Through Range 7 East
Township 2 South, Range 2 West Through Range 7 East

(b) In Pinal County:
Township 1 North, Range 8 East And Range 9 East
Township 1 South, Range 8 East And Range 9 East
Township 2 South, Range 8 East And Range 9 East
Township 3 South, Range 7 East Through Range 9 East

(c) In Yavapai County:
Township 7 North, Range 1 East And Range 1 West Through Range 2 West

All of the air quality measures and programs added or modified by S.B. 1427 for Area A will be effective from and after December 31, 2000 in the portion of Area A which includes Pinal County. This does not apply to the conversions of fleet vehicles to alternative fuels by cities, counties, and school districts. Also, the vehicles subject to the Vehicle Emissions Inspection Program that have been included within the new boundaries of Area A, except those within Pinal County, are required to comply beginning from and after December 31, 1998. Vehicles in the Pinal County area are required to comply beginning from and after January 1, 2001.

Collectively, the air quality measures which apply specifically to Area A are: Traffic Synchronization; Plans to Stabilize Targeted Unpaved Roads, Alleys, and Stabilize Unpaved Shoulders on Targeted Arterials; Crack Seal Equipment; Alternative Fuel Vehicles Requirements for Local Governments and School Districts; Adjusted Work Hours; Clean Burning Fireplace Ordinances; Use of Petroleum Products for Road Maintenance; Winter Fuel Reformulation: California Phase 2 Reformulated Gasoline with 3.5 Percent Oxygen Content by Weight; Stage I and II Vapor Recovery; Voluntary Vehicle Repair and Retrofit Program; Vehicle Emissions Testing Program Requirements (including Catalyst Replacement Program and Vehicle Repair Grant Program); Tougher Enforcement of Vehicle Registration and Emissions Test Compliance; Remote Sensing, and Travel Reduction Program (A.R.S. 49-541 and Section 41 and 42 of S.B. 1427).

25. Voluntary No-Drive Days

Arizona Legislature passed S.B. 1427 in 1998 which changes the Voluntary No Drive Days Program from a winter-time program to a year round program. Maricopa and Pima Counties are required to implement the program (A.R.S. 49-506).

26. Analysis of Intersource Credit Trading and Banking Program

Arizona Legislature passed S.B. 1427 in 1998 which appropriated $75,000 from the State General Fund to the Arizona Department of Environmental Quality for fiscal year 1998-1999 for the analysis of the environmental and economic feasibility of an intersource credit trading and banking program in Arizona for emission sources within the same nonattainment area, maintenance area, or modeling domain. In order to demonstrate environmental feasibility within a nonattainment area, maintenance area, or modeling domain, all emissions trading actions must result in overall reductions in total emissions within the same nonattainment area, maintenance area, or modeling domain. The general fund appropriation must be matched by an equal expenditure of monies from gifts, grants, or donations or the general fund monies revert to the State General Fund by the end of the fiscal year (Section 39 of S.B. 1427).

27. PM-10 Best Available Control Technology (BACT) Determinations for Stationary Sources

Maricopa County indicates that this measure involves an industry-by-industry study of the major point sources that could be made to determine the best types of control technologies that are available to yield emission reductions.

The Maricopa County Board of Supervisors is authorized by A.R.S. Section 49-479 to adopt rules for air pollution control and by A.R.S. Section 49-480 to establish, administer, and enforce a program for air quality permits. The Board adopted rules establishing an air quality permit program and pursuant to A.R.S. Section 49-473, designated the Environmental Services Department to issue permits and administer and enforce the permit program. By operation of A.R.S. Section 49-471, the executive head of the department designated under A.R.S. Section 49-473 serves as the Air Pollution Control Officer. The Air Pollution Control Officer is specifically authorized to take the enforcement actions set forth in A.R.S. Sections 49-502, 49-511, 49-512 and 49-513.

Most stationary sources already have BACT controls. In analyzing the sources, incremental benefits may be obtained from revising Rule 316--Nonmetallic Mineral Mining and Processing. Several provisions need to be clarified to improve its effectiveness.

The Department also considered requiring baghouses in place of cyclones on woodworking operations. However, some facilities already use baghouses. None

of the woodworking facilities are major sources for PM-10. With countywide emissions estimated to be 0.24 tons per day of PM-10, this source category would not be considered a significant source category. This measure would result in emission reductions of approximately 0.20 tons of PM-10 per day from woodworking operations. In conclusion, the administrative burden of developing a rule is not justified at this time for such a minimal emission reduction.

May--August	Research and draft revision
September--October 1997	Workshop draft revision
November--December 1997	Consideration by Board of Supervisors

Maricopa County Environmental Services Department has 16 inspectors, supervisors and technical staff to inspect and determine compliance at stationary sources. The department's annual revenue for the air quality program is approximately $2.6 million.

28. Low Speed Limit for Unpaved Roads

Arizona Legislature passed S.B. 1427 in 1998 which allows local authorities to decrease the speed limit to not less than 15 miles per hour on an unpaved street or road within any district in its jurisdiction if the local authority determines that the limit is necessary to achieve or maintain the National Ambient Air Quality Standards (A.R.S. 28-703).

29. Use of Petroleum Products for Public Road and Street Maintenance

Arizona Legislature passed S.B. 1427 in 1998 which allows the use of petroleum based or nonpetroleum based products in the maintenance and repair of unpaved roads, alleys and shoulders identified pursuant to A.R.S. 9-500.04 or 49-474.01. This would apply to cities, towns, and counties (A.R.S. 28-6705).

30. Crack Seal Equipment

Arizona Legislature passed S.B. 1427 in 1998 which requires cities, towns, and counties in Area A to acquire or utilize vacuum systems or other dust removal technology to reduce the particulates attributable to conventional crack sealing operations as existing equipment is retired beginning January 1, 1999. (A.R.S. 9-500.04 and 49-474.01).

31. Research in Areas with High Particulate Emissions

Arizona Legislature passed S.B. 1427 in 1998 which appropriated $50,000 for the State General Fund to the Arizona Department of Environmental Quality for Fiscal Year 1998-1999 to conduct additional research to identify sources and evaluate PM-10 control measures in areas with high particulate emissions. The research will include chemical mass balance analysis of filters in the targeted areas to provide

additional information about particulate sources. The expenditure of general fund monies must be matched by an equal expenditure of monies from gifts, grants or donations or the general funds revert to the State general fund by the end of the fiscal year (Section 39 of S.B. 1427).

32. Remote Sensing

Arizona Legislature passed S.B. 1427 in 1998 which removes the mandate for the deployment of a minimum of six remote sensing van units on the road by ADEQ in the operation of the remote sensing program. The program applies to Area A and is required to include data quality assurance and data quality evaluation.

In addition, the legislation requires that when any vehicle manufactured after the 1996 Model Year and registered in Area A is identified as exceeding the emissions standards, a notification letter to the registered vehicle owner will be sent requiring an emissions test within thirty days. If the owner does not comply, the vehicle registration will be suspended. Once compliance is achieved, the vehicle owner may apply for reinstatement on payment of applicable fees (A.R.S. 49-542.01).

33. Expansion of Public Transportation Programs

Many individual cities, as well as regional agencies, have ongoing public transportation programs. Most recently a number of local jurisdictions are considering sales tax sources to provide funding for service expansions.

34. Employer Rideshare Program Incentives

Many local governments are providing incentives for employees to participate in the rideshare program. These employers have designated Rideshare Coordinators and are promoting their incentives programs through public awareness campaigns, employee matching services, and new employee information. Incentives include preferential parking for carpools, bus subsidies, emergency rides home, and weekly or monthly prize drawings. Some jurisdictions have also included telecommuting and alternate work schedule options in their Trip Reduction Plans. Funding for these programs are usually allocated through the annual budget process. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

35. Preferential Parking for Carpools and Vanpools

Many cities and towns are providing preferential parking spaces for carpools and vanpools as part of their Trip Reduction Plans. Funding for this measure has been provided through each jurisdiction's individual Trip Reduction Program budget in conjunction with other various local departments such as Transportation or Public Works. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

36. Reduce Traffic Congestion at Major Intersections

In addition to congestion reductions from traffic signal coordination and intelligent transportation systems (covered under those measures), many local governments have identified other ways of reducing traffic congestion at major intersections. These methods include bus pullouts, additional turn lanes, parking access controls and median treatments.

37. Site-Specific Transportation Control Measures

This measure is closely related to Reduce Traffic at Major Intersections. Activities being pursued by jurisdictions to implement site-specific improvements are generally directed at major intersections, and include turn lanes, parking access controls and median work. In addition, under this measure transportation management associations (TMAs) covering 14 different areas were identified. TMAs provide implementation methods for the Trip Reduction Program.

38. Encouragement of Bicycle Travel

Many local governments are pursuing continuing improvements in bicycle information and educational programs. These programs include safety, educational and promotional flyers, posters, brochures and bike events to encourage safe use of bicycles and safe commuting. Also bike plans and a regional bike maps are prepared. This measure is assumed to be an implementing mechanism for the Trip Reduction Program.

39. Development of Bicycle Travel Facilities

A number of cities and towns are continuing programs to improve and expand bicycle facilities. Those programs cover provisions for bike lanes on arterial streets installation of bike racks, showers and lockers, and construction of multi-use paths accessible to bikes. This measure is assumed to be an implementing mechanism for the Trip Reduction Program.

40. Alternative Work Schedules

Many local governments are encouraging alternative work schedules. Strategies, such as 4-day, 10 -hour work weeks, 9-day, 80-hour work plans, staggered work schedules, and Flextime have been successfully implemented by many of the local governments. Some jurisdictions have set goals to incorporate up to 85 percent of their employees into some type of alternative work schedule. This measure is usually funded through individual departmental budgets. This measure is assumed to be an implementation mechanism for the Trip Reduction Program. Also, work schedule adjustments as a result of the Governor's authority to declare an air pollution emergency are included in the base case air quality inventories.

41. Land Use/Development Alternatives

Many local governments are encouraging land use patterns that support public transit and other alternative modes of travels. General plans outline goals, objectives and policies to promote a balanced transportation system. Development master plans strive to reduce dependency on automobiles, increase densities, provide for shorter trips, and consider alternative modes of travel. Also, plans and fee structures which encourage development in-fill have been adopted. Land use patterns and plans are reflected in the socioeconomic databases used in the air quality/transportation modeling process.

42. Encouragement of Pedestrian Travel

This measure is closely related to Land Use/Development Alternatives. Activities pursued by local governments to encourage pedestrian travel are included in land use/development planning. Efforts to increase densities, shorten trip lengths, and promote alternative transportation modes all encourage pedestrian travel. Land use patterns and plans are reflected in the socioeconomic databases used in the air quality/transportation modeling process.

43. Restrictions on the Use of Gasoline-Powered Blowers for Landscaping Maintenance

Many local governments are reducing the use of gasoline powered blowers. These governments will reduce the use of blowers by restricting them during certain hours and replacing them with vacuums and brooms.

44. Alternative Fuels for Fleets

The RPTA and its member agencies have begun an aggressive campaign to purchase, convert, and replace older, higher polluting diesel buses. Additional commitments include the delivery of 180 low floor, forty foot buses which operate solely on liquefied natural gas.

This measure represents an ordinance. Funding comes from the RPTA and member agency capital improvement budgets. Incremental costs for alternative fuel vehicles may be reimbursed by the Arizona Department of Commerce Energy Office through the Clean Air Fund.

45. Areawide Public Awareness Programs

The RPTA is carrying out an area-wide public awareness program. The program is targeted to employers and employees affected by the Maricopa County Trip Reduction Program (TRP), employers not affected by TRP and the general public. The awareness program includes paid radio and television advertising for eight weeks during the winter pollution season, promotional mailings to TRP participants up to four times per year, workshops to increase participation in Clean Air

Campaign events, and events to increase awareness of alternative modes of transportation and work schedules. High Pollution Advisory faxes are also sent to over 700 Valley employers during the winter and summer high pollution season when it is "forecast" to potentially exceed federal air quality standards. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

46. Frequent Routine Sweeping or Cleaning of Paved Roads

Twenty-one cities and towns in Maricopa County have committed to routinely sweep paved roads within their jurisdictions. The benefits of this measure are reflected in the modeling methodology for PM-10 Efficient Street Sweepers, committed control measure number 13.

47. Encouragement of Vanpooling

The RPTA is assisting employers in the formation of new vanpools through presentations to employers, providing materials to all interested parties, conducting vanpool group formation meetings, and providing vanpool matching. The RPTA staff also assist employers in promoting vanpools and will encourage employers to provide subsidies to their employees. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

48. Trip Reduction Program

The RPTA is under contract with Maricopa County to provide services to employers affected in the Trip Reduction Program under Arizona Revised Statutes 49-581 through 49-593. The RPTA provides formal training, one-on-one assistance, facilitates Transportation Management Associations and provides informational materials to over 1,250 employers in Maricopa County with 50 or more employees at a site. The Trip Reduction Program affects approximately 580,000 employees and students at 2,500 sites county-wide. The benefits of the Trip Reduction Program are reflected in the base case modeling.

49. Park and Ride Lots

The RPTA is continuing to work with member jurisdictions, private entities, and employers in the development, design, and implementation of new Park and Ride facilities in locations where they are needed. Park and Ride activities are in the on-going annual budgets of the RPTA and its member jurisdictions. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

50. Encouragement of Telecommuting, Teleworking, and Teleconferencing

The RPTA is carrying out a regional effort to increase telecommuting in the area. The RPTA provides training classes, on-site assistance, and an Internet web-site

to valley employers interested in implementing telecommuting programs. This effort is on-going and is funded as part of the budget for the Regional Rideshare Program. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

51. Promotion of High Occupancy Vehicle (HOV) Lanes and By-Pass Ramps

The regional effort to promote HOV lanes is incorporated into the Maricopa County Trip Reduction Program and the Clean Air Campaign. As part of the regional effort to promote HOV lanes and by-pass ramps, The RPTA has made a commitment to coordinate Employer Transportation Fairs, periodic Transportation Management Association meetings, and mailings to employers prior to new HOV lane segment openings. This measure is assumed to be an implementation mechanism for the Trip Reduction Program.

52. Additional Dust Control Measures

City of Scottsdale City Council passed Resolution #4752 on March 31, 1997 entitled "Air Pollution from Earth Moving Activities - Cooperation with Maricopa County". The resolution states the City's intent to work cooperatively with Maricopa County to control air pollution from earth moving activities.

The City of Scottsdale Community Development Department, Inspection Services Division tracks the number of citizen initiated dust complaint responses. One of the performance indicator goals of Inspection Services as stated in the Biennial Budget for fiscal years 1997-1999, is to achieve voluntary compliance of identified code violations within 30 days or less. Compliance with fugitive dust control by this means supplements Maricopa County Environmental Services' Rule 310 "Fugitive Dust" enforcement provisions.

Implementation is in progress. Funding is allocated through the biennial budget process.

APPENDIX N

MAG 1988 PARTICULATE PLAN FOR PM-10 EXCERPTS REGARDING CONTROL MEASURE COMMITMENTS AND SCHEDULES

List of Exhibits:

1. MAG 1988 Particulate Plan for PM-10: Phase One for the Maricopa County Area, Chapter Seven: Implementation of the MAG 1988 Particulate Plan for PM.

2. MAG 1988 Particulate Plan for PM-10: Phase One for the Maricopa County Area, Chapter Eight: Demonstration of Attainment Status.

APPENDIX N, Exhibit 1:

MAG 1988 Particulate Plan for PM-10: Phase One for the Maricopa County Area, Chapter Seven: Implementation of the MAG 1988 Particulate Plan for PM-10.

CHAPTER SEVEN

IMPLEMENTATION OF THE MAG 1988 PARTICULATE PLAN FOR PM-10

In order to improve air quality, it is important to effectively implement the measures contained in the MAG 1988 Particulate Plan for PM-10 as soon as possible or as expeditiously as practicable. The implementing entities submitted specific commitments to implement the plan by April 27, 1988. These commitments have been reviewed and an implementation schedule has been prepared to reflect the time frames specified in the commitments for implementation.

IMPLEMENTATION SCHEDULE

The following implementation schedule provides a brief description of the commitments received by MAG to implement the measures in the plan and corresponding time tables.

I. MEASURES DESIGNED TO SPECIFICALLY REDUCE PARTICULATES (PM-10)

1. Vehicle Inspection Maintenance Program - 1987 Legislation for all Model Year Vehicles on a Statewide Basis (Areawide Strategy)

   - City of Avondale will support legislation strengthening this measure and upon implementation, ensure compliance through its law enforcement agency. Time frame to be determined upon implementation of appropriate legislation.

   - City of Chandler agrees to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to include all model year vehicles on a statewide basis, beginning in the 1988 legislative session.

   - Town of Gila Bend would support this measure in general. Gila Bend would also propose an exemption for rural areas. Since the Town has no inspection stations available, the citizens would have to travel sixty-five miles into Phoenix for the vehicle inspection. In addition to gas consumption and emissions, additional traffic would be routed into the urban areas.

   - Town of Gilbert agrees to cooperate in lobbying efforts with the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to include program application on a statewide basis beginning in the 1988 legislative session. Gilbert, through its membership in MAG

and the Arizona League of Cities and Towns, will endeavor to develop municipal policy statements and lobbying priorities to focus efforts on legislation reform.

- City of Glendale will actively support the Maricopa Association of Governments in its efforts to urge the Legislature to amend the Vehicle Inspection Maintenance Program during the 1989 session.

- City of Goodyear agrees along with the Maricopa Association of Governments to urge the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to include this measure during the 1988 session.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to include application on a statewide basis.

- City of Peoria agrees along with the Maricopa Association of Governments to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to include program application on a statewide basis during the 1988 session.

- City of Scottsdale Intergovernmental Relations Division will work with other cities and organizations to support passage of legislation to expand the Vehicle Inspection Maintenance Program. City of Scottsdale supports approval of MAG 1988 Particulate Plan at MAG Regional Council meeting - March, 1988. City of Scottsdale encourages Arizona Legislature to adopt legislation - January, 1989.

- Town of Surprise would support legislation to expand the Vehicle Inspection Maintenance Program.

- City of Tempe agrees to support actively the efforts of the Maricopa Association of Governments to persuade the Arizona Legislature to expand the Vehicle Inspection Maintenance Program statewide and to include all model year vehicles.

- City of Tolleson will support legislation to expand the Vehicle Inspection Maintenance Program for all model year vehicles on a statewide basis.

- Town of Wickenburg would probably be willing to support this measure if the Legislature implements it.

- Town of Youngtown will support legislation.

- Maricopa County will provide testimony on all applicable proposed legislation demonstrating the County's support of this strategy.

- Maricopa Association of Governments supports this measure and agrees to urge the Arizona Legislature to expand the Vehicle Inspection Maintenance Program to include all model year vehicles on a statewide basis. Efforts to support the expansion will begin in the 1988 legislative session.

2. Use of Number One Diesel Fuel or Premium Diesel Fuel in Maricopa County (Areawide Strategy)

- City of Avondale would support the Legislature in banning the sale of new diesel vehicles in Maricopa County, and to require the use of Number One Diesel Fuel or Number Two Diesel Fuel with Diesel XL for all diesel powered vehicles. Time frame to be determined upon implementation of appropriate legislation.

- Town of Buckeye will support this measure.

- City of Chandler will continue to use Number Two Diesel Fuel in all municipal vehicles that use diesel fuel. Chandler will also work with the MAG cities and towns to support legislation which addresses this issue on a regional basis. Ongoing.

- City of El Mirage will support this measure.

- Town of Gila Bend would support the required use of Number One Diesel Fuel or Number Two Diesel Fuel with XL by the Arizona Legislature.

- Town of Gilbert agrees to cooperate in County or State efforts to mandate this measure. The schedule for implementation will be determined by the responsible agencies.

- City of Glendale supports regional implementation of this measure and, in cooperation with other MAG cities and towns, will support and encourage this legislation during the 1989 legislative session.

- City of Goodyear will support legislation adopted by the State of Arizona and Maricopa County.

- Town of Guadalupe supports this measure.

- The City of Mesa agrees to urge the State of Arizona Legislature to adopt legislation requiring the use of Number One Diesel Fuel or Number Two Diesel Fuel with a Premium Diesel additive for all diesel vehicles in Maricopa County. The City will evaluate using Number One Diesel Fuel in the City fleet to reduce particulate pollution. Recommendations will be made to the City Manager by September 1, 1988.

- City of Phoenix Public Transit Department initiated the use of Number One Diesel Fuel in all Phoenix Transit buses. Over the next Fiscal Year, staff will evaluate costs and benefits of using Number One Diesel Fuel in Municipal Fleet Vehicles. Funding for these activities is included in the FY1987-88 Operating Budget.

- City of Peoria supports regional implementation of this measure and, in cooperation with other MAG cities and towns, will support and encourage such legislation. The Arizona Legislature will be requested to amend the program during the 1988 session.

- City of Scottsdale Fleet Management Division agrees to continue to investigate the use of Number One Diesel Fuel or Number Two Diesel Fuel with Diesel XL (a premium diesel fuel). At the present time, the Fleet Management Division has conducted a preliminary test on Number Two Diesel with the Diesel XL additive. A preliminary test, done on two vehicles, does not indicate an emissions reduction using the additive. Fleet Management will continue to investigate the feasibility of using Number Two Diesel with Diesel XL additive, but feels further research is required before a commitment is made requiring its use in the City's diesel vehicles.

  The Fleet Management Division is currently testing Number One Diesel and its impact on particulate emissions. A reduction of solid hydrocarbons is estimated at 12-15% using Number One Diesel. Fleet Management feels this estimate is feasible and will verify through testing. There is concern involving the use of Number One Diesel and the possibility of fuel injector failure, cracked valves, piston disintegration, and other engine problems caused by heat which is generated by the hotter burning Number One Diesel. Fleet Management does not feel that the use of Number One Diesel during the months of October through April will create any problems. There is concern regarding its use during the hotter summer months. The majority of the diesel fuel usage for the City is within the Sanitation program and engine failure on these vehicles can create a major problem in sanitation services provided to the citizens. It is Fleet Management's recommendation that the Number One Diesel be tested on a sample group of vehicles through the summer months to verify its feasibility. Research feasibility of diesel devices - Ongoing. Evaluation of Number One Diesel and effects of emissions reduction - March, 1988. Research effects of Number One Diesel on engine wear - May-September, 1988.

- City of Tempe agrees to support actively the efforts of the Maricopa Association of Governments to persuade the State Legislature to mandate the use of Number One Diesel Fuel or Number Two Diesel Fuel with premium diesel fuel additive in Maricopa County. Further, the City agrees to evaluate the results of studies and programs involving the use of these fuels carried out by other jurisdictions and, if necessary, to conduct limited testing in-house. If these results are satisfactory and the use of the fuels do not invalidate vehicle warranties, the City will initiate a program to phase in the use of either Number One Diesel Fuel or Number Two Diesel Fuel with premium diesel fuel additive.

  The Arizona State Legislature will be requested during its 1989 session to enact legislation requiring the use in Maricopa County of Number One Diesel Fuel or Number Two Diesel Fuel with premium diesel fuel additive. The City will evaluate the results of other studies and programs and conduct limited in-house testing of the fuels during fiscal year 1988-89. Depending on the conclusions of the evaluation and testing and subject to Council approval, the City will begin purchasing the fuel or additive at the beginning of fiscal year 1989-90, with all diesel-powered fleet vehicles (which can accommodate the fuel or additive without excessive wear or invalidation of warranties) using number one or number two with the additive exclusively by the end of fiscal year 1989-90.

- City of Tolleson will support legislation to require the use of Number One Diesel Fuel or Number Two Diesel Fuel with additives in Maricopa County.

- Town of Youngtown will support legislation when it is passed.

3. Paving and/or Dust Proofing of Unpaved Roads, Alleys, and Parking Lots

- City of Avondale Public Works streets budget identifies the following paving projects for Fiscal Year 88-89: 1. Riley Drive - 10th Street to Dysart, 2. 10th Street - Van Buren to Jefferson, 3. 4th Street -Madison to Van Buren, 4. Cashion Road at 107th Avenue. The City of Avondale would also encourage Maricopa County in their efforts to comply with this measure.

- Town of Buckeye has all streets paved with the exception of approximately one half mile which is programmed for 1988. The Town's subdivision ordinance requires all new subdivisions to have paved streets. The majority of alleys are designed for low speed and do not produce dust. Most existing parking lots for commercial uses are paved. Buckeye will finish paving the one half mile of unpaved streets this current year. Alley paving is not really needed due to the slow speeds required to safely drive in the alleys. The Town's zoning ordinance requires new businesses to pave parking lots. This provision will remain in the ordinance and continue to be enforced.

- City of Chandler agrees to continue its ongoing street improvement plan, subject to annual review of the needs. A number of street improvements have been identified and planned for implementation during the seven-year period 1988-95, subject to annual review. Capital requirements for street improvements are reviewed annually and needs projected for the upcoming seven-year period. In addition to the construction of streets, the City presently grades all unpaved roads weekly. The paving of the 180 plus miles of unpaved alleys is cost prohibitive at this point. The alleys are graded and cleaned once per year. The City currently does not have any unpaved parking lots. Ongoing.

- City of El Mirage has all of its streets paved with the exception of about three and one half miles, one half mile of which is programmed for 1988. The remaining three miles will be treated on a regular basis with a dust control product such as magnesium chloride. The City's subdivision ordinance requires all new subdivisions to have paved streets. The majority of alleys are designed for low speed and do not produce dust. Most existing parking lots for commercial uses are paved. The City of El Mirage will finish paving its one half mile of unpaved streets during the current year. The City zoning ordinance requires new businesses to pave parking lots. This provision will remain in the ordinance and continue to be enforced.

- Town of Gila Bend will continue its efforts to pave or dust proof its unpaved roads, alleys, and parking lots. Gila Bend also encourages ADOT and Maricopa County to do the same in their respective territories. Gila Bend plans to use its highway monies to shoot oil to rejuvenate the paved roads and to suppress dust on unpaved roads.

- Town of Gilbert Public Works/Engineering Department is responsible for enforcing Town policies and ordinance requirements for paving and/or dust proofing. Gilbert does require the paving of all parking areas in conjunction with adjacent developments. Unpaved roads and alleys within Gilbert are extremely limited and will be eliminated with phased area roadway improvement plans.

- City of Glendale's Capital Improvement Program includes street improvement projects that provide for the paving of roads. The anticipated mileage of roads paved for 1988-89 is 17.2 miles.

- City of Goodyear will identify the number of mileage of unpaved roads, alleys, and parking lots within the City. Inventory unpaved roads, alleys, and parking lots: July-September, 1988; Update City Capital Improvement Plan and target high traffic areas: October-November, 1988; and Begin and continue dust proofing activities: Ongoing basis.

- Town of Guadalupe will utilize available funds for the paving and/or dust proofing of any unpaved roads and alleys as funds are made available. This measure will be implemented through the Zoning Ordinance as applications for development are submitted.

- City of Mesa agrees to continue working with citizens to form special improvement districts to pave the remaining twenty miles of unpaved roadways. The City will encourage property owners in newly annexed areas to pave unpaved roads. Staff will work with property owners to form special improvement districts. The City agrees to continue regular maintenance of alleys and will pave the remaining four unpaved City parking lots as funds become available. Ongoing. One parking lot is expected to be paved by the end of June, 1988.

- Town of Paradise Valley will implement this measure.

- City of Peoria requires the paving of all parking areas in conjunction with adjacent developments. Unpaved roads and alleys within the City are extremely limited, and a phased roadway improvement plan will be prepared.

  The City of Peoria will include within its Capital Improvement Program the dust proofing of all unimproved roadways and alleys within the City. Priorities will be based upon traffic volumes and pending or potential development. Traffic volumes and cost of maintenance will be taken into consideration when selecting the method of dust proofing.

  The City of Peoria has just instituted a paving management program. The City will regularly inspect streets, roads and alleys to determine their condition. Based upon projected traffic volumes and type of street, Peoria will schedule street repairs and resurfacing. This will prevent degradation from paved road surface to compacted soil.

  It is the desire of the City Council that a three year program be developed to address dust proofing of existing unimproved alleys and roadways within the City.

- City of Phoenix Code requires that all new roads serving new multi-family, commercial and industrial development be improved, including paving and installation of curbs and driveways consistent with Municipal standards. Paving of new roads serving subdivisions is required, based on subdivision density. These requirements are enforced through the plan approval and appropriate permitting processes.

  Paving of and other improvements to existing substandard roads are accomplished through direct City projects and through Municipal participation in improvement districts.

  The Zoning Code prescribes that all parking areas for three or more vehicles, except those associated with single family residences, be dust-proofed and include the installation of curbing around the perimeter of the parking area.

  All Municipally owned parking lots are paved prior to putting the lots into operation.

- City of Scottsdale Field Operations Department has an ongoing program to provide dust control to twenty-five percent of all dirt/gravel alleys each year. This program includes cleaning, grading, compacting, and applying a dust control agent to a minimum of twenty-five miles of alleys per year. The City of Scottsdale has an established ordinance that requires developers to install paved roads, driveways, and parking lots. The City also has an established procedure to allow for the upgrading of unimproved roads through the Improvement District process. In an attempt to control dust on dirt roads, the City of Scottsdale has an ongoing program to blade and compact all dirt roads on a quarterly basis. In addition, the City has an established policy to blade and compact dirt roads after each substantial rain in an attempt to control dust. July, 1988 through June, 1989.

- Town of Surprise will cooperate with regional transportation authorities and the Arizona Department of Transportation.

- City of Tempe has no unpaved streets; all streets are paved and all new streets must be paved as they are installed. Although the City has a substantial number of "unpaved alleys", it has no dirt alleys; all alleys are required to have a minimum six inch ABC coating. The City also has a provision in its Code requiring alleys to be maintained in a dust proofed condition. In the fall of 1987, the City initiated an experimental program of reconstructing alleys, where required, and then covering the surface with an oil spray to minimize dust. The City agrees to continue evaluation of this program and, if the results are satisfactory and subject to approval by the City Council, to implement the program on a continuing basis. Although there are a few unpaved parking lots in the City which predate existing requirements, all lots must now be paved.

  The City of Tempe will continue evaluation of its alley reconstruction/oil spray experimental program through the fall of 1988; if results are satisfactory and subject to Council approval and budget availability, an ongoing program will be initiated by July 1, 1989.

- City of Tolleson will implement this measure.

- Town of Wickenburg is committed to paving, over the next three years, all unpaved roads presently in the Town limits.

- Town of Youngtown is currently in the process of spreading ABC on its unpaved alleys. At present, there are no unpaved roads or parking lots in Youngtown.

- Maricopa County will establish a goal of paving twenty-five miles of unpaved county roads each year. Progress will be checked annually.

- Arizona Department of Transportation indicates that all existing roadways on the State Highway System in the Maricopa County Urban Planning Area are paved. In some cases, the construction of new freeways requires the use of temporary detours from existing arterial alignments. In these cases, the Arizona Department of Transportation provides temporary pavement as a dust control measure. The timing of temporary paving efforts is dictated by the overall construction schedule for each freeway segment. The schedule for future construction projects is set forth in the Five-Year Transportation Facilities Construction Program.

4. Paving and/or Dust Proofing Driveways, Curbing, and Frequent Sweeping

- City of Avondale Public Works Department plans to install curb, gutter, and sidewalk and driveway improvements on the following streets: 4th Street, Elm Lane, 2nd Street, 3rd Street, Harrison Drive, and Davis Lane during Fiscal Year 88-89. Avondale plans to purchase a new street sweeper in Fiscal Year 88-89.

- Town of Buckeye requires that all new subdivisions have paved streets with curbs and paved driveways with the exception of those having exclusively one acre or larger lots, which are required to have paved streets. Buckeye will continue this policy and encourage persons with dirt driveways to pave them. Buckeye currently sweeps all paved streets at least twice monthly and will continue this policy.

- City of Chandler has identified and plans to implement a number of street improvements, subject to annual review, during the seven-year period 1988-95. All of the improved streets and roads will be swept on a weekly basis. Municipal parking lots will continue to be swept on a monthly basis. All driveways in the City of Chandler are paved. Curbing is constructed when new streets are built or when existing streets and roads are constructed. Ongoing efforts.

- City of El Mirage requires that all new subdivisions have paved streets with curbs and paved driveways. El Mirage will continue this policy and encourage persons with dirt driveways to pave them. The City currently sweeps all paved streets at least twice monthly and will continue this policy.

- Town of Gila Bend will encourage its citizens and property owners to pave driveways. Gila Bend anticipates going to bid on a street sweeper. In the past, Maricopa County has assisted the Town in keeping streets dust free.

- Town of Gilbert Public Works/Engineering Department is responsible for enforcing policies and ordinance requirements regarding this measure. All new residential and nonresidential developments are required to pave any driveways and to construct curbing on adjacent public streets. Town policies also dictate the installation of curbing on all public streets in conjunction with area improvement districts. Public streets are swept on an ongoing basis.

- City of Glendale Capital Improvement Program includes street improvement projects that provide for the paving/construction of curbing. The anticipated mileage of curbs paved for 1988-89 is 34.4 miles. Glendale will continue its current street sweeping program.

- City of Goodyear will continue and expand the current street sweeping schedule. Goodyear has adopted subdivision and zoning regulations, improvement criteria, paved driveways and curbing. Weekly street sweeping activities of public rights-of-way: Ongoing; Review and update City regulations and criteria: July-September, 1988; and Implement and monitor regulation requirements: Ongoing.

- Town of Guadalupe will require all commercial and industrial development to pave all driveways and require off-site improvements as per the Zoning Ordinance. Frequent street sweeping is presently conducted by the Town's Public Works Department on a weekly basis. Commercial and industrial developers will pay for all curbing and paving of driveways as development is done. Guadalupe will seek funds for construction of all curbs in Town.

- City of Mesa will continue to encourage private property owners to install paved driveways and to work with citizens to form special improvement districts to improve unimproved streets including the construction of curbing. The City will continue its regular aggressive street sweeping program. Contacts with property owners regarding driveways and curbing are ongoing. Street sweeping is currently once a week for arterials and every three weeks for residential streets. The City is also using a plastic street seal to reduce street deterioration and thus the frequency of street sweeping.

- Town of Paradise Valley will implement this measure.

- City of Phoenix Code requires that construction of driveways conform to placement, paving and other standards prescribed by the City Engineer. Construction of curbing on new or substandard streets is addressed in the street improvements described in the preceding measure.

  The Streets and Traffic Department sweeps all major and nonresidential collector streets weekly. Major streets in the Downtown area (that bounded by Seventh Avenue, McDowell Road, Seventh Street and Jefferson Avenue) are swept three times each week. Residential streets are swept at least four times each year. All Municipally-owned parking lots are swept as needed.

- City of Peoria requires all new residential and non-residential developments to pave any driveways and to construct standard curbing on adjacent public streets. City policies also dictate the installation of

curbing on all public street facilities in conjunction with area improvement districts. Public streets in Peoria are swept on a bi-weekly basis. This measure will be implemented in conjunction with on-going private development proposals and areawide transportation improvement program. Street sweeping program is currently underway. In the future, in conjunction with right-of-way improvement in existing developed areas, the City will construct asphalt driveway approaches where required.

- City of Scottsdale Field Services Division will provide street sweeping for FY 88-89. The annual projection is for Field Services to sweep a total of 36,147 miles with mechanical pickup broom sweepers. The frequency rate for sweeping curbed residential streets is 18.5 times per year, or once every three weeks. Arterial/collector streets will be swept at a frequency rate, ranging from twice per week to weekly, based on location and need.

  Curbing and paving driveways is required by the City's Private Development Ordinance with stipulations for new development, as well as in the Improvement District process. Sweep 36,147 miles of curbed streets - July, 1988 through June, 1989. Require developers to install curbing and paved driveways with all new development and continue the established Improvement District process. Ongoing.

- Town of Surprise will cooperate with the Arizona Department of Transportation and regional transportation authorities. Weekly street sweeping and curbing will be constructed when monies are available.

- City of Tempe has long required that driveways be paved and that curbing be installed with any sidewalk or street construction or reconstruction. Tempe City Code prohibits the issuance of a building permit until plans for off-site improvements, including sidewalks, curbing, paving, etc., are submitted and denies the granting of a final certificate of occupancy until such improvements are completed and inspected, unless construction of off-sites is secured by a performance bond. City Code also provides, in certain cases, for the installation of street improvements, including off-sites, prior to development of adjacent property. Section 29-2 of the City Code requires property owners to keep sidewalks and the land between the back of curb and the right-of-way on their side of the street free and clean of debris. In addition, the City conducts a street sweeping program wherein: all arterials are swept at a minimum once a week; all residential streets at least once a month; all sidewalk/bicycle paths at least once every two months; and other sidewalks on an as-needed basis. Further, downtown Tempe (First St. to University, railroad track to College) is swept daily. Ongoing.

- City of Tolleson will implement this measure.

- Town of Wickenburg intends to construct a considerable amount of curbing on the most traveled streets in the Town which are designated state highways. Additionally, the Town is involved in sweeping its streets on a frequent basis and will continue to do so. There are no plans to pave any private driveways presently existing, but as businesses develop the Town's zoning and building laws will be enforced insofar as they apply to driveways.

- Town of Youngtown is presently installing curbing and has increased the frequency with which streets are swept.

- Maricopa County does provide an additional two-feet of pavement on both sides of its typical road section, which helps minimize shoulder erosion and edge dust generation. The County plans to continue this program. Maricopa County will establish the following street sweeping goal: A. Improved Subdivision Areas: Arterials and collectors - sweep every four weeks. Interior residential - sweep every six weeks. B. Rural Areas: Intersections with dirt roads - sweep every five weeks. Other locations on a need basis, particularly after storms.

- Arizona Department of Transportation has responsibility for maintenance of facilities on the State Highway System. Street sweeping on State Highways is accomplished through three mechanisms: (1) Under intergovernmental agreements with ADOT, cities and towns perform routine sweeping of arterial streets on the State Highway System; (2) ADOT contracts with the private sector to secure regular maintenance of freeway facilities and; (3) ADOT supplements these efforts with ad-hoc sweeping performed by ADOT personnel using state-owned equipment, as needed. The frequency and approximate schedule for freeway maintenance are set forth in the terms of the contract between ADOT and the private vendor. Approximately nine hundred curb miles are swept at least once monthly. Many freeway segments are swept twice or four times per month under this ongoing program.

5. Vegetation and Windbreaks to Control Windblown Dust

- City of Avondale Parks and Recreation Department and the Avondale Public Works Department plan to implement the following projects: Construction of a Park - 1988; Construction of Medians on 115th Avenue - 1989; Construction of Park on Dysart Road - 1990; and Construction of Greenbelts Along the Agua Fria River - 1990.

- Town of Buckeye will support this measure.

- City of Chandler is currently responsible for maintaining plant vegetation in its neighborhood and community parks, as well as retention and right-of-way areas. Chandler agrees to maintain these areas to the extent that existing plant vegetation is useful as a windbreak to control windblown dust. Ongoing efforts.

- City of El Mirage will support this measure.

- Town of Gila Bend plans to plant trees and grass in the Community Center Park which is the only open area. Work is currently in progress.

- Town of Gilbert Planning Department is responsible for the review and inspection of landscaping required for all new residential and nonresidential development by Town policies and Zoning Code.

- City of Glendale Streetscape Program provides for landscaping along streets as well as medians. This will be conducted on an ongoing basis.

- City of Goodyear will provide information to property owners on measures to control windblown dust. Ongoing efforts.

- Town of Guadalupe will enforce its Zoning Ordinance for landscaping of all multi-family, commercial, and industrial development in future cases. Presently, the zoning regulations require ten percent landscaping for these developments. Windbreaks will be recommended to developers, if needed. Guadalupe will make an effort to landscape their property in order to implement this recommendation.

- City of Mesa will continue to require low water consuming trees be planted in new development to provide attractive landscaping and windbreaks. Ongoing.

- Town of Paradise Valley will implement this measure.

- City of Peoria Public Works Department will explore the cost and feasibility of establishing a landscaping plan for existing and new right-of-way along arterial streets in Peoria. This measure, implemented in conjunction with new commercial development proposals, will express a preference for xeriscape or sodded landscaping.

- City of Phoenix has provisions requiring that the landscaping of parking lots are included in stipulations in rezoning decisions and in conjunction with the plan review process.

- City of Scottsdale's Field Operations Department plans to seed several miles of roadside shoulders with wild flowers as a test program. The target area will be along a roadway in an undeveloped section of the city. The City of Scottsdale has ongoing programs to plant vegetation. Major street improvement projects require the planting of vegetation in medians and along scenic corridors. Test program to start in 1988. Planting of medians and scenic corridors with road improvements - Ongoing.

- Town of Surprise will plant vegetation and construct windbreaks as time and money are available.

- City of Tempe has in place extremely strict landscaping requirements which provide for substantial vegetation cover and landscape screening. Further, the City has an aggressive program to landscape and maintain public rights-of-way. It has also been actively urging the Arizona Department of Transportation (ADOT) to provide upgraded landscaping along new freeways and frontage roads and has agreed to participate in cost-sharing arrangements to ensure such landscaping. The City, however, does agree to review its current requirements to determine if any enhancements to control windblown dust are practicable. It also agrees to provide information to the public through the City newsletter and other established channels regarding the usefulness of drought resistant vegetation in controlling dust.

  The City will review current requirements during the first two quarters of FY 1988-89, with changes, if any, targeted for implementation during the third quarter. Information will be disseminated to the public during the first quarter of FY 1988-89 and periodically thereafter.

- Town of Youngtown will continue to plant grass and shrubs to control windblown dust in its parks.

6. Restrictions on the Use of Blowers for Landscaping Maintenance (Areawide Strategy)

- City of Avondale will support the Arizona State Legislature in their efforts in regulating the use of blowers for landscaping maintenance in Avondale. The time frame for this measure will be determined by the Arizona State Legislature.

- Town of Buckeye will support this measure.

- City of El Mirage will support this measure.

- Town of Gila Bend would support legislation at the State and County levels.

- Town of Gilbert Building Inspection/Code Enforcement Department is responsible for the enforcement of Zoning Code violations. This measure should be implemented by Maricopa County on an areawide basis in order to ensure effectiveness.

- Town of Guadalupe supports this measure.

- City of Mesa will urge all landscape contractors to limit or suspend their use of blowers for landscape maintenance. The City will evaluate amending present landscape maintenance contracts at expiration to possibly prohibit blower usage on City contracts. The City will eliminate blower usage by permanent City staff for landscape maintenance upon adoption of this plan.

- Town of Paradise Valley will implement this measure.

- City of Phoenix will phase-out over the next two Fiscal Years, the use of blowers for City landscape maintenance activity from areas where dust and blowing pollen create a public nuisance. New vacuum-type maintenance equipment will be acquired for use in these areas.

- City of Scottsdale agrees to take steps to reduce or prohibit the use of blowers for landscaping maintenance. The measure will involve identifying areas in which blowers are used - both in the private and public sector - and, to what extent they are being used by homeowners, contractors and governmental agencies. The major objective of the program will be to identify in what areas blowers are being used and to suggest alternative methods to accomplish the task. May, 1988 through 1991.

- Town of Surprise will implement this measure by ordinance.

- City of Tempe agrees to refrain from using blowers for landscaping maintenance in City-owned properties during periods of high particulate pollution and to explore alternatives to their use, with the objective of phasing out the use of blowers over the next two years. It also agrees to provide the public, through established communications channels,

information on the detrimental effect of blowers on air quality and urging voluntary restrictions on their use. The City will, in addition, as a member of the Maricopa Association of Governments (MAG), support state legislative or county efforts to develop and implement areawide restrictions on the use of blowers for landscaping maintenance.

The City will effect controls on the use of blowers at City-owned facilities during periods of high particulate pollution as of January 1, 1989 and, if economical and practical alternatives are available, phase out their use by July 1, 1990. Information urging the public voluntarily to restrict the use of blowers will be disseminated during the summer and Fall of 1988 and periodically thereafter. Support for state or county imposed areawide measures will be ongoing.

- City of Tolleson supports this measure.

7. Watering, Vehicle and Street Washings at Construction Sites

- City of Avondale requires construction companies to maintain a dust free area during construction. Avondale enforces the Maricopa County regulation for controlling dust from construction sites. This measure is undertaken by the Avondale Public Works Department, Building Inspector, and Community Development Department.

- Town of Buckeye requires dust control on all street and airport paving projects and watering of all construction sites for public buildings. This requirement will remain in effect.

- City of Chandler will continue to enforce the Maricopa Association of Governments' specifications for prevention of dust nuisance due to construction operations within City limits. Construction site inspection and dust control monitoring is currently in effect.

- City of El Mirage requires dust control on all street and airport paving projects and watering of all construction sites for public buildings. This requirement will remain in effect.

- Town of Gila Bend will require that all construction sites be watered down, vehicles be washed down, and streets at and adjacent to sites be washed down.

- Town of Gilbert will cooperate in the enforcement of existing or new Maricopa County legislation. Gilbert, however, does not believe that this measure would be an efficient usage of water resources or be effective in reducing particulate levels, given the arid climate in Maricopa County.

- City of Glendale will continue to support the County's dust mitigation program required for construction sites. However, this measure is contrary to the City's water conservation program.

- Town of Guadalupe supports this measure.

- City of Mesa Building Inspections Division will inform contractors of methods to reduce cost at construction sites, including washing and low water consuming methods for removing or reducing dust.

- Town of Paradise Valley will implement this measure.

- City of Phoenix Code prohibits causing or allowing fill, excavation, construction debris, mud, dirt and other materials to be spilled, dumped, or tracked onto streets, alleys, or sidewalks. Contracts for construction of Municipal facilities contain stipulations equivalent to these Code requirements.

- City of Peoria Engineering Department will expand inspection services for off-site construction activities during the prime construction period. The prime construction period is identified as approximately mid-April through early December.

  An off-site construction inspector will be scheduled to work every Saturday that it is known to the Engineering Department in the City of Peoria that construction activity by a firm or individual holding a City off-site construction permit, is scheduled to work on Saturdays. The presence of the off-site construction inspector will detour contractors from site work, excavation, and grading without instituting appropriate dust control measures. The main objective for the Saturday inspections during the prime construction period is to obtain voluntary compliance by contractors and subcontractors of firms that have obtained City of Peoria off-site construction permits.

  The City of Peoria, through its Engineering Department-Construction Inspection Division, and the Building Safety Department-Building Inspection Division will reaffirm its efforts to require contractors to clean public streets at the end of each construction day and to insure that the waste material is properly disposed of. Initiate program - April, 1988. Evaluate performance, operational problems of inspection programs and streets meeting requirements - November/December, 1988.

- City of Scottsdale inspectors respond to complaints related to dust control due to the construction of buildings and public works projects as soon as they are received. The Field Inspections Unit in the Community Development Department is responsible for this activity. Dirt hauls, in addition, are monitored very closely, and they require a permit. In this case, if sufficient sweeping and water spraying are not present and, if the contractor does not improve dust control, building inspections are withheld.

  To identify the requirements and instructions for dust control for a construction project, a field meeting is conducted between the Field Inspector and Project Manager or Superintendent (prior to construction). At this meeting, instructions on the control of dust pollution, dirt deposits on City streets, water availability, construction noise, and adequate continuance of traffic flow are discussed. As guidelines for properly maintaining dust, contractors are required to follow the Maricopa Association of Governments and Maricopa County standards. Ongoing efforts.

- Town of Surprise Public Works Director will monitor the implementation of this measure.

- City of Tempe agrees to work with Maricopa County and, in the construction of freeways, with the Arizona Department of Transportation (ADOT) to ensure that existing regulations governing the watering of construction sites are properly enforced and to review and consider additional local controls, if practicable. While recognizing the effectiveness of this strategy in mitigating particulate pollution, the City, however, questions the feasibility and wisdom of greatly expanding watering requirements in a desert environ. Priorities must be balanced and the commitment of additional amounts of such a valuable, scarce and life-sustaining resource as water to dust control seems shortsighted and even foolhardy. A measure such as this which may be perfectly reasonable in many areas with more abundant water supplies seems not only unreasonable but ridiculous in an arid climate. Full implementation of this measure would directly contravene the difficult steps this state has taken in restricting the use of groundwater, imposing water conservation requirements, limiting the use of certain plant materials, etc. to ensure adequate water supplies for present and future generations. Consequently, the City would urge the Environmental Protection Agency (EPA) to recognize in promulgating particulate standards the significance of climatic variations and to explore more rational mitigation strategies for desert areas.

  The City will work on an ongoing basis with Maricopa County and ADOT to ensure enforcement of existing regulations. It will investigate the practicability of additional local controls during Fiscal Year 1988-89, with implementation of additional controls, if any, targeted for July, 1989.

- City of Tolleson supports this measure.

- Town of Wickenburg makes every effort, and will continue to do so, to enforce contractual obligations upon construction companies to keep the construction site watered down during the construction period. The Town, however, feels that the washing of streets and the washing of construction vehicles as a matter of requirement tends to create a greater problem suffered by Arizona, to wit: The shortage of water. It is the Town's position that the shortage of water is of equal or greater concern than any pollution being generated by the Town of Wickenburg or its residents.

- Town of Youngtown will require that all construction sites be kept as particulate free as possible.

- Maricopa County Division of Public Health Bureau of Air Pollution Control will continue to enforce the existing and any new Maricopa County Air Pollution Control Regulations which apply to the control of dust from construction activities. The Bureau plans to hire two additional Air Quality Control Investigators for the Enforcement Section. Enforcement of dust control regulations - Ongoing. Hire and train new staff - August, 1988 to October, 1988.

- Arizona Department of Transportation includes dust control as a part of roadway construction projects whenever such control is appropriate. ADOT standard contract specifications (Section 207-Dust Palliative)

describe these efforts as "applying all water required for the control of dust as considered necessary for the safety and convenience of the traveling public, for the reduction of the dust nuisance to adjacent property, for the allaying of dust in crusher and pit operations and on roads used to haul materials, and for other purposes as directed by the Engineer." Dust control activities related to roadway construction on the State Highway System represent an ongoing effort of the Department. The schedule for future construction projects in the MAG area is set forth in the Five-Year Transportation Facilities Construction Program.

8. Industrial/Point Source Controls (Areawide Strategy)

- City of Chandler agrees to encourage the Maricopa County Bureau of Air Pollution Control to examine additional industrial source and construction site controls for effectiveness in reducing particulate pollution.

- Town of Gilbert will cooperate in the enforcement of existing or new legislation related to this measure.

- Town of Guadalupe will address this measure as development plans are submitted for site plan review. Based upon zoning regulations, controls can be required.

- City of Glendale in cooperation with the MAG cities and towns supports a review of existing controls and will encourage the Arizona Department of Transportation and Maricopa County to make appropriate changes.

- City of Mesa agrees to urge the State of Arizona Legislature to adopt legislation to control industrial and point sources of particulate pollution on a regional level. The City of Mesa will urge timely adoption of this measure. The implementation schedule will be determined by the Legislature.

- City of Peoria agrees to encourage the Maricopa County Bureau of Air Pollution Control to examine additional industrial source and construction site controls.

- City of Phoenix, this Fiscal Year, engaged a contractor to recommend improved water conservation methods for commercial and industrial users, including construction site users. The results of this study, to be completed in FY1988-89, will assist in identifying construction site watering practices which contribute to water conservation while minimizing excessive water use which contributes to tracking.

- City of Scottsdale inspectors respond to complaints related to dust control due to the construction of buildings and public works projects as soon as they are received. The Field Inspections Unit in the Community Development Department is responsible for this activity. Dirt hauls, in addition, are monitored very closely, and they require a permit. In this case, if sufficient sweeping and water spraying are not present and, if the contractor does not improve dust control, building inspections are withheld.

To identify the requirements and instructions for dust control for a construction project, a field meeting is conducted between the Field Inspector and Project Manager or Superintendent (prior to construction). At this meeting, instructions on the control of dust pollution, dirt deposits on City streets, water availability, construction noise, and adequate continuance of traffic flow are discussed. As guidelines for properly maintaining dust, contractors are required to follow the Maricopa Association of Governments and Maricopa County standards. Ongoing.

- City of Tempe agrees to work with the Maricopa Association of Governments to encourage Maricopa County and the Arizona Department of Transportation, as appropriate, to review existing regulations governing industrial sources and construction sites, to implement any reasonable changes necessary to strengthen those regulations and to enforce strictly existing and new regulations. The City will also cooperate in any studies to develop additional, practical controls. Further, the City agrees to enforce strictly local controls and to re-evaluate existing regulations and procedures to determine the possibility of strengthening them.

  The City's efforts to work with the County and ADOT are ongoing. Any instances of excessive dust or emissions reported or observed are immediately referred to the appropriate agencies. The City will continue carefully to police its public works construction contracts and enforce other local controls and will conduct, during FY 1988-89, an in-house evaluation of local conditions and controls. If additional local measures are determined necessary and practical, recommendations will be submitted to the City Council for consideration by the end of FY 1988-89.

- Maricopa County Division of Public Health Bureau of Air Pollution Control has an ongoing program for review and development of regulations. The Bureau has proposed to adopt the following particulate matter standards: a twenty percent opacity standard, the NSPS for non-metallic mineral processing plants, and the new National Ambient Air Quality Standard for PM-10. Present proposed revisions and new regulations to the Maricopa County Board of Supervisors for approval and adoption -May, 1988 through June, 1988. Ongoing review and development of regulations - July, 1988.

9. Windbreaks for Controlling Particulates from Agricultural Activities

- City of Avondale would support the County in its efforts to implement this measure. The majority of agricultural activities within the planning area of Avondale are within the County. Avondale plans to address this measure through its paving projects as well. Time frame to be determined by Maricopa County.

- Town of Gila Bend could request that Paloma Ranch construct a windbreak to the West of Town to shield the residential area adjacent to their fields.

- Town of Gilbert agrees to encourage the planting of windbreaks at the landowner's discretion. Currently there are several square miles of land in Gilbert limits that are still zoned for agricultural usage, or that have been rezoned for other uses but remains in agricultural usage pending future development. The planting of windbreaks would be a temporary measure given the rapid pace of development in recent years. Also, this measure conflicts with areawide water conservation objectives.

- City of Glendale will encourage the Maricopa County Bureau of Air Pollution Control to strengthen existing controls.

- Town of Guadalupe supports this measure.

- City of Peoria agrees to encourage the planting of windbreaks at the landowner's discretion. The planting of windbreaks would be a temporary measure given the rapid pace of development in recent years. This measure conflicts with areawide water conservation objectives.

- City of Tempe will review its existing zoning and other applicable ordinances to determine if any changes can be effected which would provide controls on particulates generated by agricultural activities and will, through established communications channels, provide the public information on the advantages of voluntary controls. It should be noted, however, that only 3.4 percent of Tempe's land is agricultural and no additional agricultural zoning is anticipated.

10. Design Specifications and Catalytic Controls for New or Remodeled Fireplaces and Wood Burning Stoves (Areawide Strategy)

- City of Avondale would support appropriate legislation addressing the design specifications and catalytic controls for new or remodeled fireplaces and wood burning stoves. Time frame to be determined by the Arizona Legislature.

- Town of Gila Bend encourages the Arizona Legislature and Maricopa County to implement design specifications and catalytic controls for new or remodeled fireplaces and wood burning stoves.

- Town of Gilbert agrees to support any areawide legislation for this measure.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge the Arizona Legislature to adopt legislation setting design specification standards and catalytic control standards for new or remodeled fireplaces and wood burning stoves in Maricopa County.

- City of Peoria agrees to support any areawide legislation for this measure.

- City of Scottsdale Community Development Department and Rural Metro Fire Department, in association with the Research and Innovation Unit and Intergovernmental Relations, is currently compiling a library of existing research and case studies along with available

product information. Staff intends to review the results and existing technologies in order to determine a final plan for implementation within one year.

- City of Tempe agrees to work with the Maricopa Association of Governments (MAG) to encourage Maricopa County to develop and implement regulations requiring design specifications and catalytic controls for new and remodeled fireplaces and wood burning stoves or, in the absence of county action, to urge the State Legislature to enact legislation requiring the imposition of such specifications and controls countywide during the 1989 session.

- Maricopa County Division of Public Health Bureau of Air Pollution Control will be requesting delegation of authority from EPA to enforce the application sections of the New Source Performance Standard: New Residential Wood Heaters promulgated by EPA on February 26, 1988. Letter to EPA requesting delegation of authority to enforce the applicable sections of the New Source Performance Standard: New Residential Wood Heaters - May, 1988.

11. Ordinances to Control the Use of Fireplaces and Wood Burning Stoves (Areawide Strategy)

- City of Avondale Public Works Department will be requested to review and develop measures that will control the use of fireplaces and wood burning stoves in Avondale. These measures would be submitted to the City Council in the form of an ordinance for their review and approval. Research and review findings by other entities on this measure: January - July, 1989; Prepare ordinance - August, 1989; and Presentation to Council for review and action - September, 1989.

- Town of Buckeye supports this measure.

- City of El Mirage supports this measure.

- Town of Gilbert agrees to support any areawide legislation for this measure.

- City of Mesa will consider adopting a local ordinance restricting the use of fireplaces and wood burning stoves during inversion months. City staff will evaluate other ordinances, means of enforcement, benefits and whether a ban should apply during the whole period or just during particulate pollution alerts. Recommendations will be presented to the City Manager by December 1, 1988.

- Town of Paradise Valley will implement this measure.

- City of Scottsdale Community Development Department and Rural Metro Fire Department, in association with the Research and Innovation Unit and Intergovernmental Relations, is currently compiling a library of existing and proposed ordinances and available documentation on their implementation. By researching these case histories, staff intends to provide a final plan for implementation within one year.

- City of Tempe agrees to participate in any joint or regional effort to develop a model ordinance to control the use of fireplaces and wood burning stoves on high pollution days during the winter months. If a joint or regional effort is not undertaken, the City will independently pursue the development and implementation of such an ordinance on a local basis. The schedule for implementation will be affected by the approach - regional or individual - taken to develop the ordinance, but every effort will be made to have the ordinance in place by January 1, 1990, subject to Council approval.

- City of Tolleson supports the adoption of ordinances designed to control the use of fireplaces and wood burning stoves.

- Town of Youngtown will pass an ordinance as necessary to comply with any legislation passed for "no burn" days.

- Maricopa County Department of Planning and Development will present the document to the Board of Supervisors for adoption as part of the Uniform Building Code. This will be undertaken once a model code is recommended by MAG and/or the State Legislature.

12. Restrictions on Motorized Vehicles for Off-Road Use (Areawide Strategy)

- City of Avondale Clerk's Office would be responsible for preparing an ordinance that would restrict the use of motorized vehicles for off-road purposes. Research and prepare ordinance: January, 1989; Submit ordinance for review and action to the City Council: June, 1989; and Initiate the program: July, 1989.

- Town of Buckeye supports this measure.

- Town of Carefree agrees to impose restrictions on the use of motorized vehicles for off-road purposes within the Town limits. Carefree has already adopted an All Terrain Trespassing Code which prohibits any person from operating an all terrain vehicle, sand buggie, Go-Kart, trail bike, mini bike or similar motor vehicle in, on and over any wash, common area or other area not located on a public street or highway, excluding construction equipment, without having on his person the written authorization of each land owner upon which such vehicle has been or is being operated.

- Town of Cave Creek agrees to encourage restrictions on the use of motorized vehicles for off-road purposes within the Town limits. After preparation of the Cave Creek Master Plan, attention will be given to the use of motorized vehicles for off-road purposes within the Town limits. When it is convenient, a study group will be organized to assess this problem.

- City of Chandler agrees to continue enforcing the appropriate municipal ordinances relating to the operation of off-road motorized vehicles on public and private land in its jurisdiction. Ongoing.

- City of El Mirage supports this measure.

- Town of Gilbert agrees to support areawide legislation for this measure.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge the Arizona State Legislature to adopt Senate Bill 1048 designating special motorized vehicle off-road use areas and prohibiting motorized vehicles from off-road use elsewhere in the county. The City of Mesa agrees to assist in the enforcement of restrictions on motorized vehicles for off-road use. The City will urge timely adoption of this bill. The implementation schedule will be determined by the Legislature.

- Town of Paradise Valley will implement this measure.

- City of Phoenix uses signage at the Mountain Preserves and Municipal Parks to prohibit the use of vehicles off established roads. This Fiscal Year, the City certified twenty-one rangers to enforce this provision, in addition to performing other security, safety, and user awareness-related activities.

- City of Peoria Attorney will prepare a draft ordinance restricting the use of motorized vehicles for off-road purposes in the City of Peoria, and present it to the City Council on or before October, 1988 for review and subsequent action. Work on the draft ordinance will begin in June, 1988.

- City of Scottsdale Police Department agrees to continue the enforcement of the City Ordinances and State statutes that pertain to the unauthorized use of off-road vehicles on private or public lands. In conjunction with the City Attorney's Office, the Police Department will evaluate existing statutes in an effort to ensure that sufficient legislation exists to assist enforcement. New legislation will be suggested if enforceable alternatives are identified.

- City of Tempe through the Maricopa Association of Governments will begin efforts to encourage other municipalities, Maricopa County and/or the State Legislature to develop and implement restrictions on the use of motorized vehicles for off-road purposes following adoption of the Particulate Plan. A bill currently before the Legislature proposes the payment of certain fees for vehicles used for off-road purposes. If it proves infeasible, given the 1988 legislative timetable, to strengthen this measure, then the Legislature will be asked to reconsider the issue during its 1989 session. The City will review its existing local controls during fiscal year 1988-89 and will submit recommendations for changes, if any, to the appropriate persons for consideration during the latter half of the year.

- City of Tolleson supports this measure.

- Town of Wickenburg does enforce ordinances prohibiting off-road vehicles to traverse undeveloped, off-road areas.

- Town of Youngtown will pass an ordinance as necessary to support legislative action.

- Maricopa County Sheriff's Department agrees to continue to enforce existing laws prohibiting the unlawful operation of motorized vehicles in Maricopa County. Ongoing.

13. Requirements for Truck Covers (Areawide Strategy)

- City of Avondale would support the State Legislature concerning truck cover requirements and would adopt appropriate requirements by ordinance. Avondale would adopt requirements by ordinance upon completion of legislation by the State Legislature.

- Town of Buckeye supports this measure.

- Town of Carefree is currently undergoing preparation of a Town Code that will include measures that require truck covers on trucks transporting materials that contribute to the particulates in the air. It is anticipated that the Town Code can be adopted by August, 1988.

- Town of Cave Creek will investigate the possibility of requiring that truck covers transporting materials such as sand, dirt, gravel, rock, and other materials that contribute to particulates in the air be covered or treated in order to prevent particles from escaping into the air within the Town limits. This will be investigated after the preparation of the Cave Creek Master Plan.

- City of Chandler agrees to encourage the Arizona Legislature to consider possible implementation measures for requiring truck covers. The Legislature will be requested to address this issue during the 1988 Legislative Session.

- City of El Mirage supports this measure.

- Town of Gila Bend supports requirements for truck covers.

- Town of Gilbert agrees to support any such areawide legislation.

- City of Glendale supports regional implementation of this measure by Maricopa County and/or the State of Arizona during the 1989 legislative session.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge the Arizona Legislature to adopt Senate Bill 1228 and House Bill 2172 amending Arizona Revised Statutes providing that certain loads on vehicles be covered. The City of Mesa will urge the Legislature to adopt these bills in the 1988 legislative session.

- Town of Paradise Valley will implement this measure.

- City of Phoenix staff, in response to a request by the City Council, has developed a "wetting program" to address the release of particulate matter from earth hauling operations. Under this program, stipulations are incorporated into grading and drainage permits requiring the wetting of loads and washing of trailer rails.

  This Fiscal Year, the Public Works Department began to include stipulations in contracts for the acquisition of fill dirt requiring that operations conform to Maricopa County Health Department Bureau of Air Pollution Control rules governing controls of particulate emissions.

Compliance with grading and drainage permit stipulations is monitored by two full-time equivalent employees of the Engineering Department.

- City of Peoria supports regional implementation of this measure by Maricopa County or Arizona Legislature during the 1989 session.

- City of Scottsdale Fleet Management Division, Field Services Division, Sanitation Division and Parks Maintenance Division will use covers whenever possible to reduce air particulate pollution. Fleet Management has an ongoing program to install screen covers on all new Sanitation refuse collection trucks as they are put into service. Two years ago Fleet Management retrofitted all the residential refuse collection trucks to prevent particulate pollution as they transport materials to the landfills from their collection routes.

  Field Services operates two large dump trucks and two large semi-dump trailers that have had covers purchased and are presently scheduled for installation. Field Services also bought and is currently installing covers on the few smaller vehicles that regularly are used to transport loose materials to and from job sites. Parks Maintenance Division will also purchase and install tarp covers on all their vehicles that are used to transport loose materials by August 1, 1988. Ongoing efforts.

- Town of Surprise will cooperate with the Arizona Legislature and Maricopa County.

- City of Tempe will actively support legislation requiring the use of truck covers. Such legislation has been introduced for several years and the City of Tempe has favored and will continue to favor its enactment. If efforts are unsuccessful, the City will nevertheless examine the possibility of securing covers for its fleet vehicles. In addition, the City is currently in the process of developing an ordinance governing the hauling of certain fill or excavation material. Although this proposed ordinance is limited in application (more than 5,000 cubic yards or a hauling duration of more than ten days) and does not require covers, it does mandate, as one condition of receiving a permit to haul, that the hauler assume responsibility of removing any spillage from streets or sidewalks or pay the City twice the cost of the cleanup.

  If it is not possible to "resurrect" the truck covers legislation during the 1988 session, the State Legislature will be requested to consider the issue again during its 1989 session. Acquisition of covers for City fleet vehicles will be addressed during the FY 1989-90 budget process. The proposed hauling ordinance is scheduled for City Council consideration during late April, 1988.

- City of Tolleson supports this measure.

- Town of Wickenburg is committed to enforce these State statutes with the same vigor as it does other State laws imposed upon it. The State of Arizona presently is considering statutes that prohibit trucks from transporting sand, dirt, gravel, rock and other materials under certain conditions unless the load is covered or treated.

- Town of Youngtown will budget for the 1988-89 fiscal year to purchase covers for all its trucks which transport materials that could contribute to particulates in the air.

- Maricopa County Division of Public Health Bureau of Air Pollution Control will continue to enforce the existing and any new Maricopa County Air Pollution Control Regulation which applies to the control of dust from materials transport. The Bureau plans to hire two additional Air Quality Control Investigators for the Enforcement Section. Enforcement of dust control regulations - Ongoing. Hire and train new staff - August, 1988 to October, 1988.

14. Maintaining Land After Zoning is Given but Not Developed

- City of Avondale Planning Office will develop an ordinance that will regulate the maintenance of undeveloped land within the corporate limits of Avondale. Research and develop ordinance: January, 1989; Present to City Council for review and action: June, 1989; and Initiate program: July, 1989.

- Town of Buckeye supports this measure.

- Town of Carefree will hereafter stipulate as a condition to favorable zoning requests, that the developer/owner maintain their land until such time as development has begun; and, then and only then will the land be allowed to be graded. Furthermore, the Town will grant rezoning on a conditional basis only, requiring that if development is not completed by a certain date, the property will revert back to its original zoning and original state.

- Town of Cave Creek will request its Planning and Zoning Commission to review rezoning cases where zoning is given but the land is not developed. The Zoning Enforcement Department will also investigate incorporation of rezoned land review for zoning enforcement into its regular activities.

- City of Chandler agrees to enforce a nuisance ordinance which requires general upkeep of all land (including vacant property) within the community. Chandler Ordinance No. 1880 specifies requirements for general upkeep of land to a level that would promote the health, safety, and welfare of the citizens of Chandler and protect neighborhoods and property values from deterioration and decline. Also, when an active construction project must traverse future development phases, such access road is required to be covered. Ongoing.

- City of El Mirage supports this measure.

- Town of Gila Bend currently has in its zoning ordinance general purpose language requiring proper maintenance of such land. Gila Bend could work on strengthening these provisions.

- Town of Gilbert Planning Department is responsible for enforcing Town policies in this area. Property which is zoned by Gilbert but which is not yet ready for actual development, is almost universally maintained

for agricultural usage in order to ensure a revenue stream. Property within larger commercial parcels which are not developed are required to be landscaped. Ongoing efforts.

- Town of Guadalupe will utilize zoning regulations to attach conditions that undeveloped land will be maintained by the owner. If necessary, other existing or new ordinances will be used to enforce this measure.

- City of Mesa will study means for controlling dust on land which has been zoned but not developed and will evaluate adopting this measure if reasonable means are available. The City of Mesa Planning Department will conduct a study and submit recommendations to the City Manager by December 31, 1988.

- Town of Paradise Valley will implement this measure.

- City of Phoenix, based on site conditions, may add stipulations to rezoning decisions requiring that the site be maintained in a weed-free and dust-free manner.

- City of Scottsdale Zoning Inspectors respond to complaints related to weeds or trash on undeveloped land within twenty-four hours after receiving the complaint. The Zoning Enforcement Unit in Project Review of the Community Development Department is responsible for this activity.

  If after an inspection it is determined that a violation exists because of weeds or trash, the owner of the property is notified to clear the land. A compliance notice is issued with a due date for compliance noted. If on the due date there has been no compliance a civil ticket is then issued with a court date and time established. Ongoing.

- City of Tempe agrees to review its zoning and subdivision requirements to determine appropriate measures to maintain land after zoning is given but before the land is developed and to submit any such measures to the City Council for consideration. However, since Tempe is landlocked, zoning is in place and rezonings are limited, the practical effect of this measure may be limited. The review will be conducted during FY 1988-89 with any recommendations to be submitted to the Council for consideration in the latter half of the fiscal year.

- City of Tolleson supports this measure.

- Town of Youngtown Police Department will periodically check the land usage in undeveloped area.

15. Moving the State Fair Dates to March 1 through October 1 and/or Moving the Location of the State Fair

- City of Avondale will support the Arizona Legislature in implementing this measure.

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage the Arizona Legislature to address the issue of moving the State Fair dates to March 1 through October 1 and/or move the location of the State Fair. The Legislature will be requested to address this issue during the 1988 legislative session.

- City of El Mirage supports this measure.

- Town of Gila Bend would support moving the location of the fair to the West side of Town. There is a large abandoned racing facility off I-10 which would be ideal - keeping congestion from the center of Phoenix.

- Town of Gilbert agrees to support any legislation for this measure.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to support Senate Bill 1175 in the Arizona Legislature prescribing earliest and latest dates for holding the State Fair. The City of Mesa will urge the Legislature to adopt the bill in 1988 legislative session.

- City of Peoria agrees to encourage the Arizona Legislature to address the issue of moving the State Fair dates and/or move the location of the State Fair.

- City of Scottsdale Intergovernmental Relations Division will coordinate city support for this legislation. The Legislature will be requested to pass this legislation in January, 1989.

- Town of Surprise supports moving the State Fair to a new location to provide better traffic mobility and traffic control.

- City of Tempe agrees to support legislation to change the dates of the State Fair to sometime between March 1 and October 1 and/or to move the location of the Fair. Changing the dates would avoid the problems associated with the temperature inversions frequently experienced during the fall and winter months and relocating the Fair away from its congested central Phoenix area would reduce the particulate pollution in its present heavily urbanized locale. 1989 Legislative Session.

- Town of Wickenburg commits to changing the State Fair dates to dates consistent with the objectives of this resolution and with the wishes of the majority of other State and local agencies.

- Town of Youngtown supports this measure.

- Maricopa County Office of Government Relations with the approval of the Maricopa County Board of Supervisors agrees to advocate for and support legislation calling for a change of the dates and/or location of the Arizona State Fair. The County will provide testimony on all applicable proposed legislation indicating Maricopa County's support of this strategy.

II. MEASURE ADOPTED FOR THE CARBON MONOXIDE AND OZONE PLANS WHICH ALSO REDUCE PARTICULATES (PM-10)

16. Vehicle Inspection Maintenance Program - 1987 Legislation Statewide (Areawide Strategy)

- City of Avondale agrees to urge the Arizona State Legislature to apply the Vehicle Inspection Maintenance Program on a statewide basis in the 1988 legislative session.
- City of Chandler agrees to urge the Legislature to amend the Vehicle Inspection Maintenance Program to include program application on a statewide basis, beginning in the 1988 legislative session.
- Town of Gila Bend would support a statewide inspection program in general. Allowances should be made for remote, rural areas.
- Town of Gilbert agrees to lobby the Legislature to apply the Vehicle Inspection Maintenance Program on a statewide basis beginning in the 1988 legislative session.
- City of Glendale will support legislation for a statewide application of the Vehicle Inspection Maintenance Program. Glendale will work with the League of Arizona Cities and Towns in drafting and requesting introduction of this legislation. Efforts will begin in August, 1987.
- Town of Guadalupe supports this measure.
- City of Mesa agrees to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to include an application on a statewide basis as part of its 1988 legislative program.
- City of Peoria agrees to urge the Legislature to apply the Vehicle Inspection Maintenance Program on a statewide basis during the 1988 legislative session.
- City of Phoenix supports this measure.
- City of Scottsdale agrees to support and encourage the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to include an application on a statewide basis during the 1988 legislative session.
- Town of Surprise supports this measure.
- City of Tempe agrees to support the Maricopa Association of Governments in its efforts to urge the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to apply the program on a statewide basis during the 1989 legislative session.
- City of Tolleson supports this measure.
- Town of Wickenburg supports this measure.

- Maricopa County Office of Government Relations agrees to advocate for the support legislation to amend the Vehicle Inspection Maintenance Program to include application on a statewide basis and no waiver repair limits. Efforts will begin in September, 1987 and continue through July, 1988.

- The Maricopa Association of Governments agrees to urge the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to include program application on a statewide basis beginning in the 1988 legislative session.

- Arizona Legislature passed S.B. 1360 in 1987 which expands the Vehicle Inspection Maintenance Program to include those persons who commute into a nonattainment area but live outside these areas. Universities and community colleges located inside a nonattainment area shall require all students who drive to have their vehicle inspected, regardless of where that vehicle is registered. Violators will be subject to a $50 fine on the first offense and a $300 fine for the second offense within a year. The fine is waived if the vehicle is inspected. The inspection maintenance requirements will be enforced through a program implemented by Motor Vehicle Division which will provide that all vehicles required to be tested be issued a modified validating tab or an air quality compliance decal. The bill also increases the amount of recommended repairs for model year 1975-79 vehicles from $100 to $200, and increases the waiver fee from $1 to $5. S.B. 1360 effective date - August, 1987.

17. Vehicle Inspection Maintenance Program - 1987 Legislation Countywide (Areawide Strategy)

- City of Avondale agrees to urge the Arizona State Legislature to apply the Vehicle Inspection Maintenance Program on a countywide basis in the 1988 legislative session.

- City of Chandler agrees to urge the Legislature to apply the Vehicle Inspection Maintenance Program on a countywide basis should the Legislature decline to enact a statewide program beginning in the 1988 legislative session.

- Town of Gila Bend would support a countywide inspection program in general. Allowances should be made for remote, rural areas.

- Town of Gilbert prefers a statewide application of the Vehicle Inspection Maintenance Program. However, if only a countywide application can be obtained, Gilbert will support it beginning in the 1988 legislative session.

- City of Glendale will support legislation for a countywide application of the Vehicle Inspection Maintenance Program. Glendale will work with the League of Arizona Cities and Towns in drafting and requesting introduction of this legislation. Efforts will begin in August, 1987.

- City of Goodyear agrees to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to include application on a countywide basis during the 1988 legislative session.

- Town of Guadalupe supports this measure.

- City of Peoria agrees to urge the Legislature to apply the Vehicle Inspection Maintenance Program on a countywide basis during the 1988 legislative session.

- City of Phoenix supports this measure.

- City of Scottsdale agrees to support and encourage the Arizona Legislature to amend the Vehicle Inspection Maintenance Program to include an application on a countywide basis during the 1988 legislative session.

- City of Tempe agrees to urge the Arizona State Legislature to amend the Vehicle Inspection Maintenance Program to apply it on a countywide basis if the Legislature refuses to approve a statewide application during the 1989 legislative session.

- City of Tolleson supports this measure.

- Maricopa County Office of Government Relations agrees to advocate for a countywide application of the Vehicle Inspection Maintenance Program with no waiver limits. Efforts will begin in September, 1987 and continue through July, 1988.

18. Short-Range Transit Improvements (Areawide Strategy)

- City of Avondale does not currently contract with the Regional Public Transportation Authority (RPTA) for services and does not anticipate the provision of this service within the near future (89-91). Time frame for the implementation of short-range transit improvements to be determined by RPTA.

- Town of Buckeye supports this measure.

- City of Chandler will support and coordinate with the RPTA in the implementation of short-range transit improvements through the Chandler Public Works Department beginning in 1987. Ongoing efforts.

- City of El Mirage supports this measure.

- Town of Gilbert will initiate active relations with the RPTA to determine the most effective role for Gilbert in the areawide transit planning process. Gilbert will develop short-range objectives by September, 1988.

- City of Glendale will continue to support the RPTA in the implementation of short-range transit improvements. The Mayor of Glendale serves on the RPTA Board and the Assistant City Manager serves on the RPTA Advisory Committee. Glendale is also currently studying the implementation of a downtown circulatory system. Council action on the downtown circulatory system - February, 1988. Express service expanded in North Glendale - September 30, 1987.

- City of Goodyear supports the short-range transit improvements under the authority of the RPTA.

- Town of Guadalupe supports this measure.

- City of Mesa Office of Special Programs will be the lead agency in implementing public transit improvements at the local level. The Regional Public Transit Authority will act as the lead agency in transit service development at the regional level.

  The City of Mesa began operating an "internal circulator" fixed-route bus service within the City of Mesa on May 1, 1987. This program is scheduled to provide 250,438 service miles in FY1987-88. The City also contracts for Dial-A-Ride service which provided 142,000 passenger trips in FY1986-87. The City of Mesa agrees to continue to study possible service extensions in terms of hours and days of transit service. The City of Mesa will also continue to study corridors for new transit service implementation. The City of Mesa will also continue to study corridors for new transit service implementation. The City of Mesa agrees to implement changes to transit service in FY1988-89 if these two studies show that the expansion of transit service in Mesa would have a significant mitigating impact upon traffic congestion and if a long term dedicated funding source for such service expansion is available.

- City of Peoria will examine the feasibility of expanding the short-range transit improvements provided by the RPTA. Peoria has budgeted for a feasibility study to augment this transit service within city boundaries. Conduct study - February, 1988. Present study to Council - May, 1988.

- City of Phoenix Public Transit Department has submitted a $46,110,000 capital improvement program for the five year period 1987-88 through 1991-92. Includes 125 new buses, four transit centers, two park and rides, and numerous other support projects. The Department projects a continuation of the delivery of 40,500 miles of service per day, at a cost of $35,000,000 per year. Service improvements for 1987-88 includes $250,000 for evening bus service, $190,000 to expand dial-a-ride service in Deer Valley and $116,000 in miscellaneous routes improvements, totaling $556,000.

- City of Scottsdale has recently increased frequency and added additional transit routes to its transit system. Scottsdale now provides transit service on eight regular routes and three express routes. Since 1985, the new transit system has increased the size of the service area by 98 percent, to 323 square miles. Furthermore, yearly bus travel in Scottsdale has increased 79 percent over the old system, to 418,733 miles. Usage has increased 29 percent to 403,212 boardings per year.

- Town of Surprise is implementing a Dial-A-Ride transportation system to provide service to connecting transit systems.

- City of Tempe agrees: 1) as a member of the Regional Public Transportation Authority, to participate in and support the efforts of the RPTA to implement short-range transit improvements through the use of the annual $5 million allocation for improved bus and

community-funded transportation services, and 2) as funding permits, to continue to make improvements in existing levels of bus/trolley service, to add new service, including special needs transportation, and to effect enhancements in transit-related facilities (bus shelters, benches, etc.) designed to make the use of public transportation more attractive and comfortable.

Ongoing, with the following specific improvements already effected or planned: One new RPTA express bus route implemented, bringing the total number of express routes serving Tempe to four -December, 1987. Two new RPTA local bus routes implemented - January, 1987. One new RPTA local bus route implemented, bringing the total number of local routes serving Tempe to five - April, 1987. $24,000 grant from the City to the Tempe Transit Authority for a 10-passenger, 5-wheelchair equipped van to provide special needs service -May, 1987. Dial-A-Ride or similar service to provide service within Tempe and among Tempe, Scottsdale and Mesa Scheduled for implementation -January, 1988. Bus shelters: 1986-87, four purchased; 1987-88, nine planned for purchase and installation. Other service: The City contracts with the City of Phoenix for bus service on two local and three express bus routes; it provides a subsidy (1987-88 $5,416/month) to the Tempe Transit Authority to support operation of three routes in Tempe; and it provides an annual allocation (1986-87, $5,000) to the Red Cross. Evaluation of these services is ongoing and improvements are made as funding permits.

- Maricopa County Human Resources Department agrees to advocate for increased short-range transit improvements to be developed through the Regional Public Transportation Authority. The Director of the Maricopa County Office of Human Resource Department will advocate specifically for: increased levels of service, expanded service, improved transit system security, and increased marketing and promotional activities. Efforts begin in September, 1987 and continue through August, 1988.

- The Arizona Department of Transportation as mandated by S.B. 1360 (Omnibus air quality) will explore public transportation alternatives which could improve air quality and meet regional transportation needs in the metropolitan Phoenix and Tucson areas. The range of projects under consideration presently includes: new transit service, fixed route extensions, ridesharing, vanpooling, and park and ride lots. Draft evaluation of project findings - September, 1988. Report to the Legislature - January, 1989.

- Regional Public Transportation Authority subsidizes the operation of 15 bus routes in Maricopa County. Two of the routes are operated by a private provider under a contract administered by the RPTA; the remaining 13 routes are operated by a private provider under a contract administered by the City of Phoenix Public Transit Department.

  Six of the 15 RPTA-subsidized bus routes are express routes which began service in December, 1986. Seven local routes began service in January, 1987, and an additional two local routes began service in April, 1987. Performance of these routes is evaluated on a continuous basis.

19. Long-Range Transit Improvements (Areawide Strategy)

- City of Avondale, through the intergovernmental process, will support the planning conducted by the Regional Public Transportation Authority and implementation of long-range transit improvements. Voter approval of a mass transit system will be encouraged.

- Town of Buckeye supports this measure.

- City of Chandler will support the RPTA with long-range transit improvements and will promote the RPTA plan when submitted to the voters in 1991.

- City of El Mirage supports this measure.

- Town of Gilbert will actively solicit participation in and develop support for RPTA planning and implementation of its long-range transit improvements. Gilbert will support RPTA plan when submitted to voters in 1989.

- City of Glendale will support RPTA planning and implementation of long-range transit improvements. Glendale will support the RPTA plan when submitted to the voters in 1989.

- City of Goodyear will support, through the intergovernmental process, RPTA planning and implementation of long-range transit improvements. Goodyear will review and support the RPTA Plan and encourage voter approval when submitted to the voters in 1989.

- Town of Guadalupe supports this measure.

- City of Mesa will be responsible for the development of the Capital Improvement Program (CIP) and Transportation Improvement Program (TIP) with the RPTA being the lead agency in developing a comprehensive Valleywide transit master plan. The RPTA plan is tentatively scheduled for completion early 1989. The TIP has been developed and submitted to MAG and the Urban Mass Transportation Administration.

- City of Peoria will support the RPTA planning and implementation of long-range transit improvements.

- City of Phoenix will continue its practice to secure, on a project specific basis, commitments for dedication of rights-of-way to accelerate future transit improvements.

- City of Scottsdale will work cooperatively with the RPTA on its planning and promotion efforts. City of Scottsdale will also contribute to a feasibility study and preliminary assessment of a multi-modal mass transportation terminal in the Downtown area. Such a facility could be utilized by local and regional bus services, trolley systems, Dial-a-Ride, charter and limo services, and a variety of taxi and rental services. Such facilities are typically integrated with large parking facilities and mixed-use retail centers. If planned and managed effectively, there is a possibility that such a facility could ultimately become self-

supporting or even profitable. City of Scottsdale will provide appropriate bus stop amenities including signage, benches, and passenger shelters. RPTA planning - July, 1987 - February, 1988. Terminal study - 180 days. Bus Stop Amenities - 12 Months.

- Town of Surprise will support long-range transit improvements as needs dictate.

- City of Tempe, as a member of the Regional Public Transportation Authority, agrees to participate in and support the development of a regional public transportation plan, to include rapid transit, bus and special needs service components, as provided in Laws 1985, Chapter 308 and the expeditious implementation of the plan (subject to voter approval of the specified up to one-half cent additional sales tax increase). Planning - July, 1986 through June, 1991. Countywide election - 1989.

- Maricopa County Human Resources Department agrees to advocate for increased long-range transit improvements to be developed through the Regional Public Transportation Authority. The Director of the Maricopa County Office of Human Resource Department will advocate for implementation, at a minimum, of the "superbus system" (more buses). Efforts begin in October, 1987 and continue through August, 1988.

- Arizona Legislature passed S.B. 1360 in 1987 which establishes a light rail study commission to evaluate the feasibility of a statewide light rail system. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority and City of Phoenix have begun work to define the regional transit network including rapid transit plans for the most heavily-traveled corridors. RPTA and City of Phoenix staff will coordinate and supervise consultants in this effort.

  Set up project and review earlier transit systems planning work -March, 1987 to April, 1987.

  Establish study goals - March, 1987 to May, 1987.

  Define transportation problem - April, 1987 to July, 1987.

  Define transit market - May, 1987 to August, 1987.

  Identify candidate corridors - March, 1987 to August, 1987.

  Identify candidate technologies - June, 1987 to August, 1987.

  Develop and evaluate system concepts - August, 1987 to January, 1988.

  Recommend systems plan; prepare implementation and staging plan - December, 1987 to February, 1988.

20. Exclusive Bus Lanes on Arterials and Freeways as Appropriate (Areawide Strategy)

- City of Avondale will support RPTA and MAG efforts to have exclusive bus lanes established on highways and freeways as appropriate. Avondale does not currently contract for bus services. Exclusive bus lanes on arterials would reduce total system capacity and worsen air quality. Implementation time frame to be determined by RPTA.

- Town of Buckeye supports this measure.

- City of Chandler agrees to provide dedicated bus lanes on arterials when traffic conditions warrant within sixty days after their need is determined, and when this measure will not contribute to traffic congestion.

- City of El Mirage supports this measure.

- Town of Gilbert agrees to provide dedicated bus lanes on arterials and freeways when appropriate.

- City of Glendale will support RPTA and MAG efforts to have exclusive bus lanes established on highways and freeways as appropriate. Glendale will also study the feasibility of implementing exclusive bus lanes on arterials (one year study).

- City of Goodyear will support RPTA and MAG efforts to have exclusive bus lanes established on highways and freeways as appropriate.

- Town of Guadalupe supports this measure.

- City of Mesa will encourage ADOT with input from the RPTA, to provide exclusive bus lanes on freeways when appropriate and warranted by traffic conditions. The City will consider similar dedicated lanes on arterials at such time that traffic conditions warrant this action. This measure will not be implemented at the local level in the near future as it would contribute to traffic congestion.

- City of Peoria will support RPTA and MAG efforts to have exclusive bus lanes established on highways and freeways as appropriate.

- City of Phoenix will maintain the existing bus only lanes on Central/First Avenues. Bus only lanes will be restored on Central Avenue upon completion of construction of the underground parking structure. Phoenix will continue to look for opportunities for additional applications of this measure. FY1986-87 Operating Budget includes $400,450 to support ten full-time equivalent employees to evaluate additional traffic control measures, including this measure.

- City of Scottsdale Planning and Traffic Engineering Program will coordinate ongoing studies concerning the feasibility and appropriateness of providing facilities for buses and other high occupancy vehicles on arterial streets in the City. Since the Planning Program also is responsible for implementing transit improvements, internal coordination and proper sequencing of transportation

improvements will be assured. Additional coordination will be required with the Regional Public Transportation Authority, Phoenix Transit, and neighboring municipalities. The Arizona Department of Transportation is responsible for freeway bus lanes. The City of Scottsdale will request ADOT to consider providing exclusive bus lanes on freeways where appropriate. Efforts begin in July, 1987 and are ongoing. Feasibility studies for Bus/HOV Lanes begin July, 1987.

- Town of Surprise will support the study of this measure by the Regional Public Transportation Authority and governmental entities with jurisdiction over affected roadways.

- City of Tempe agrees to encourage the Arizona Department of Transportation to implement exclusive bus lanes on selected freeways, provided: 1) substantial short and long-term transit improvements are effected which justify the dedication of such lanes; 2) traffic studies indicate that the implementation of exclusive bus lanes would not contribute to traffic congestion; 3) implementation can be accomplished without adversely affecting other programs promoting the use of high occupancy vehicles - i.e., ridesharing; and 4) implementation can be accommodated within existing or planned freeway design.

- Town of Wickenburg, if provided a freeway, would certainly commit itself to the implementation of bus lanes.

- Maricopa County Highway Department concurs in the policy of providing exclusive bus and HOV lanes on major arterials and freeways as appropriate. ADOT is the responsible agency for HOV lanes on freeways; Maricopa County Highway Department would have the responsibility for any county highway arterials for which the HOV requirement might exist. ADOT has provided to Maricopa County Highway Department its current plans for HOV construction on the valley freeway system. Maricopa County Highway Department concurs with that planned program and will continue to monitor progress for those portions of the freeway system which are located in unincorporated areas of the county. At this time, there is no need within the existing highway system which might require this application. The concept is being retained as a highway planning policy on a permanent basis. This measure is fully implemented. The Maricopa County Highway Department will continue to monitor this as an ongoing activity.

- Regional Public Transportation Authority and City of Phoenix will continue to pursue the introduction of exclusive bus lanes. Ongoing.

21. Expanded MAG Regional Ridesharing Program (Areawide Strategy)

- City of Avondale will support the Public Awareness Program through local publicity efforts, disseminate ridesharing information, and encourage businesses and industry to initiate rideshare programs beginning in September, 1987. Ongoing efforts.

- Town of Buckeye supports this measure.

- City of Chandler will assist MAG in expanding the Regional Ridesharing Program through the Regional Public Transportation Authority. Chandler Public Works Department will monitor and evaluate the City's Employee Rideshare Program on a yearly basis.

- City of El Mirage supports this measure.

- Town of Gila Bend supports the expansion of the voluntary MAG Regional Rideshare Program with increased marketing and employer contacts.

- City of Glendale will coordinate public awareness programs with MAG, RPTA, and Clean Air Force. Glendale will initiate a ridesharing program for the 1,200 City employees. In addition, the Transit Division will be working with major employers and employment areas to initiate rideshare programs. Public awareness efforts will begin in August, 1988 and the rideshare program will be implemented in January, 1988.

- City of Goodyear will support the MAG/RPTA Public Awareness Program and Clean Air Force through local publicity efforts such as the City newsletter and local news media. Goodyear will also assist in the dissemination of ridesharing information and materials encouraging businesses and industry to initiate rideshare programs. Develop public awareness program - Ongoing. Coordinate with RPTA on dissemination of RPTA ridesharing materials - Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa, as a member of RPTA, is working to support the RPTA staff's efforts to expand regional ridesharing. The City of Mesa, as an employer with the assistance of RPTA, will continue to develop match lists and encourage carpooling among its employees. The City of Mesa staff has surveyed City employees and has began matching employees for ridesharing. Once the City of Mesa program is fully in operation, City staff will assist the RPTA in approaching other major employers in the City of Mesa.

- Town of Gilbert will assist MAG in expanding the Regional Ridesharing Program through the RPTA. Gilbert will develop and encourage an employee ridesharing program or alternative transportation program during 1987-88.

- City of Peoria Community Services Department will participate jointly with MAG in promoting the Regional Ridesharing Program. Peoria will post signs that designate and promote ridesharing. Water bills will also contain information to promote ridesharing. Development of public awareness program - December, 1987. City calendar will promote ridesharing - January, 1988. Ongoing coordination efforts.

- City of Phoenix supports this measure.

- City of Scottsdale will continue to work with RPTA staff in the implementation of a rideshare program for employees. Scottsdale will work with the Scottsdale Chamber of Commerce in encouraging large employers to adopt similar programs for employees. The City Transit

Program will begin implementation of the City Rideshare Program in June, 1987. Once the City Rideshare Program has begun, Scottsdale will encourage other firms, via the Chamber of Commerce, to adopt similar internal rideshare programs.

- Town of Surprise will cooperate with other municipalities or governments in encouraging carpools and vanpools.

- City of Tempe agrees to implement an in-house rideshare program for all City employees. The program will be based in the City Manager's Office, and commence with a comprehensive needs assessment/survey.

  The City of Tempe further agrees to support and assist the RPTA in all reasonable measures to expand the rideshare program to private employers. These measures may include such items as special inserts in the monthly water bill, articles in the TEMPE TODAY newsletter and letters to Tempe employers from the Mayor. Survey will begin - Fall of 1987. Rideshare program implementation - First Quarter of FY 88-89. Support and assistance to RPTA - Ongoing.

- City of Tolleson supports this measure.

- Town of Youngtown supports the Maricopa Association of Governments in this effort.

- Maricopa County Facilities Management is an active participant in the MAG Rideshare Program. One staff person is assigned to coordinate the effort. The County has a computer link directly with MAG. A periodic schedule of employee notification is underway with information being distributed with paychecks and in the in-house newsletter (Insider). Efforts began in September, 1986 and will continue through November, 1987. The County ridesharing program is ongoing.

- Arizona Department of Transportation annually has provided funding for the Capitol Complex Rideshare Program, administered by the Energy Office of the Arizona Department of Commerce. This program promotes the use of ridesharing by State employees working in the Capitol area. This program is coordinated with the MAG Regional Ridesharing Program operated by the Regional Public Transportation Authority. ADOT support for the Capitol Complex Rideshare Program will continue in fiscal year 1988, and will reflect a 53 percent increase compared to the FY 1987 funding level. Current program objectives include: initiate vanpool operation, conduct a computer survey, conduct a major promotional campaign, work with the City of Phoenix to promote bus ridership by State employees, distribute newsletters about carpooling, maintain the efforts of State agency rideshare coordinators, and continue cooperation with the Arizona Department of Administration, regarding parking management. Effective date of FY 1988 funding - October, 1987. Summary of program results -November, 1988.

- Maricopa Association of Governments agrees to expand the Regional Ridesharing Program through the Regional Public Transportation Authority. With a combination of Federal Highway Administration

funds and monies from the Exxon Restitution Fund, the program has been expanded significantly. Staff has been increased from two to five people, with additional contract support for clerical activities. Three employer marketing representatives have been hired to work directly with valley employers to design internal rideshare programs for each business.

The main objective for the program is to develop transportation management plans that will promote a number of different modes of travel, (i.e. transit, carpooling, vanpooling, bicycling), thereby reducing the use of single occupant vehicles. Other measures such as alternative work hours will be promoted to help reduce localized congestion problems. The goal for the 1987 program year is to develop programs in all local governments, the top 20 valley employers and a wide variety of small and medium sized businesses. A total of 125 firms will be contacted in 1987 and 700 firms will be contacted by 1995.

In addition to the marketing services, the computer pool match systems have been enhanced and the efforts toward personalized matching services have been expanded. There is more direct contact with the rideshare applicants, and greater emphasis has been placed on informing them about the various transit alternatives that are available to them.

Initiate program - January, 1987

Upgrade pool match computer equipment - February, 1987

Hire and organize staff for the expanded Rideshare Program - March, 1987

Develop marketing plan and promotional literature for site specific program; organize public awareness activities to promote "Rideshare Day" events - March to April, 1987

Develop employee transportation coordinator training; conduct major update of applicant data base - May, 1987.

Develop video presentations on flextime, alternative transit modes, overcoming objections to ridesharing, and employer rideshare incentives - June to August, 1987

Ongoing Efforts:

a. Contact employers to develop specific programs
b. Conduct evaluation of program
c. Coordinate with local Chambers of Commerce to organize group employer meetings
d. Conduct employee transportation coordinator training sessions
e. Install off-site terminals in large employer rideshare programs
f. Publish quarterly rideshare newsletter
g. Establish vanpool program in Maricopa County

22. Model Trip Reduction Ordinance - Employer Based Transportation Management (Areawide Strategy)

- City of Avondale will review and consider for adoption the Model Trip Reduction Ordinance prepared by the Maricopa Association of Governments.

- Town of Buckeye will provide a representative for the Working Group for the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. Buckeye commits to adopt the ordinance within three months of final approval of the model by MAG.

- City of Chandler has appointed a local representative to serve on the Working Group for the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. If so encouraged by the MAG Regional Council, Chandler will review and adopt a tailored form of the Model Ordinance. After such adoption, the first set of obligated employers would submit their trip reduction plans and programs six months after the effective date of the ordinance.

- City of El Mirage will adopt the trip reduction ordinance within three months of final approval by MAG.

- Town of Gila Bend supports the development of the Model Trip Reduction Ordinance through MAG. Currently, there are no large employers within the Town limits. However, Gila Bend encourages its citizens to share rides and combine purpose of trips in order to avoid excess mileage.

- Town of Gilbert supports the development of the Model Trip Reduction Ordinance and Coordinated Parking Management Program by MAG.

- City of Glendale staff will participate and assist in the MAG program to develop a Model Trip Reduction Ordinance. Glendale will adopt an ordinance that will embody appropriate trip reduction measures for Glendale. Efforts will begin in May, 1987 and continue through June, 1988.

- City of Goodyear supports the preparation of the Model Trip Reduction Ordinance by MAG. Goodyear will review and provide input on the proposed ordinance and consider for adoption. Efforts began in January, 1987 and continue through March, 1988.

- Town of Guadalupe will assume all costs associated with this ordinance.

- City of Mesa will review and decide whether to adopt the Model Trip Reduction Ordinance within ninety days after its approval by MAG. If the City adopts the ordinance the City will develop a plan for implementation of the ordinance.

- Town of Paradise Valley will implement this measure.

- City of Peoria supports MAG in the preparation of the Model Trip Reduction Ordinance and will consider adoption in March, 1988.

- City of Phoenix will participate and assist in the MAG program to develop a model ordinance for future consideration by Phoenix and other MAG area communities.

- City of Scottsdale will review the MAG Model Trip Reduction Ordinance and determine which, if any, recommendations are appropriate and feasible. Adoption of a local ordinance could be considered 90 to 120 days after completion of the model ordinance by MAG.

- Town of Surprise will cooperate with other municipalities or governments in implementing an employer based transportation management ordinance. Surprise will review the MAG Model Trip Reduction Ordinance.

- City of Tempe conducts in-house efforts to encourage employees to use alternative modes of transportation. The efforts are ongoing. Letters to major employers urging similar efforts will be mailed during the first quarter of FY1988-89 and information to the public on the advantages of using other means of transportation will be provided, through established communications channels, periodically throughout the year. The City endorses deferring action on the TRO but is considering contingency plans to permit compliance should a TRO be mandated or otherwise adopted during FY1988-89. If a TRO is mandated by the State or federal government, the City will undertake whatever steps are necessary to comply.

- City of Tolleson supports this measure.

- Town of Youngtown supports MAG efforts with this measure.

- Maricopa County Office of the County Manager will designate a Maricopa County staff person to serve as a liaison to MAG in the development of a Model Trip Reduction Ordinance. Staff person designated - September, 1987. Efforts will continue through June, 1988.

- The Maricopa Association of Governments prepared a Model Trip Reduction Ordinance and Coordinated Parking Management Program for consideration for adoption by the MAG cities, towns, and Maricopa County. Specifically, MAG selected K. T. Analytics, Inc. as a qualified consultant with expertise in transportation systems management. The consultant was responsible for preparing the Model Transportation Systems Management or Trip Reduction Ordinance and Coordinated Parking Management Program. The consultant also worked closely with a short-term MAG Working Group composed of representatives from local jurisdictions, Maricopa County and the private sector. The working group critically reviewed consultant products and also solicited input from the private development community. Approximately six months were required for the consultant to complete the proposed project.

- Arizona Legislature passed S.B. 1360 in 1987 which requires cities and counties to include air quality measures in their general plans. They may also adopt trip reduction ordinances. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority will have a representative on the MAG Working Group which will assist the consultant in designing the ordinance. Once the ordinance is drafted, Regional Rideshare staff will work with the local governments and MAG to see that the ordinances are adopted in the various jurisdictions. Assistance will be provided with designing the performance requirements for businesses and deciding which trip reduction measures would be best suited to the different locales. When the ordinances are adopted, the Rideshare staff can assist the local jurisdictions to inform businesses of the new requirements, train them on rideshare techniques, and help them develop specific programs tailored to their company's needs. Appoint rideshare representative to the Model Ordinance Working Group - June, 1987. Work with consultant to develop model ordinance - June to November, 1987. Ongoing efforts.

23. Voluntary No Drive Days Program (Areawide Strategy)

- City of Avondale will support this media campaign and will also develop and implement a local public awareness clean air program beginning in September, 1987. Efforts will be ongoing. The program will be implemented during the months of October through April.

- Town of Buckeye supports this measure.

- City of Chandler agrees to support a regional campaign for Voluntary No Drive Days through public service announcements on City Cable Channel 35, utility bill inserts, and articles in monthly newsletter. Chandler Public Works Department will coordinate and conduct local traffic counts to measure any traffic reduction impact of the campaign. Activities will begin on approximately October 1, 1988.

- City of El Mirage supports this measure.

- Town of Gila Bend supports the Voluntary No Drive Days during the winter season. Gila Bend will continue to advertise on Channel 6 - the Town's cable television media. Occasional newspaper articles will appear to promote public awareness.

- Town of Gilbert Manager and Engineering Department will support the no drive campaign through public service announcements on the Town public access channel and articles in the Citizens Newsletter. Town Engineering Department will coordinate and conduct local traffic counts to measure any traffic reduction impact of the campaign. Planning and preparation will continue through October 1, 1987.

- City of Glendale will support the campaigns of MAG and the Clean Air Force. Glendale will develop a clean air education/awareness program. Program development will begin in August, 1987 and the program will be initiated in January, 1988.

- City of Goodyear agrees to support the Maricopa County Health Department, Regional Public Transportation Authority, Maricopa Association of Governments, and the Phoenix Metropolitan and Local Chambers of Commerce in their media campaigns. City of Goodyear will develop and implement a local public awareness clean air program. Program development - July, 1988. Publications - Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa will also support the no drive campaign through public service announcements and utility newsletter inserts. The City will also work with the Mesa Chamber of Commerce to promote the no drive campaign with local businesses. During the FY1987-88, the City of Mesa supported and participated in the Voluntary No Drive Days Program. The City will again participate in the program during FY1988-89 with increased promotion and publicity.

- City of Peoria agrees to support the Maricopa County Health Department, Regional Public Transportation Authority, Maricopa Association of Governments, and the Phoenix Metropolitan and Local Chambers of Commerce in their media campaigns. Peoria will also develop and implement a local public awareness campaign. Develop program -September, 1987. Initiate local publications - October 1, 1987 -March, 1988.

- City of Phoenix supports this measure.

- City of Scottsdale Communications and Public Affairs Office working in conjunction with MAG, Maricopa County Health Department, and Regional Public Transportation Authority will support the public awareness/no drive day campaign conducted by the Phoenix Metropolitan Chamber of Commerce, and will institute a Scottsdale publicity campaign. Efforts will begin - July, 1987. Initiation of Scottsdale publicity campaign - August, 1987. Development of incentive program for no drive day volunteers - September, 1987.

- Town of Surprise will cooperate with other governmental entities for the implementation of this measure during the winter months when carbon monoxide violations occur.

- City of Tempe agrees to support the efforts of the Phoenix Metropolitan Chamber of Commerce, the Regional Public Transportation Authority and the Maricopa Association of Governments in continuing during the fall/winter of 1988-89 the "Voluntary No Drive Days" Program initiated in 1987. During the 1987-88 program period, the City of Tempe, as a municipal employer, participated in the "Challenge Week" Competition by providing employees information on the program and financial incentives to join in the effort. It also provided public speakers and, through established channels, public information. A similar effort is anticipated during the next campaign.

- City of Tolleson supports this measure.

- Maricopa County Division of Public Health will provide air quality technical data at the beginning of the carbon monoxide season and periodically throughout the season whenever carbon monoxide exceeds the standard to radio and TV media, industries, interest public and private agencies for the Voluntary No Drive Days Program. The County Public Information Office will also support the program by providing

appropriate notification to County employees. Public access phone line for general public - June, 1987 to October, 1987. Conduct press conference at beginning of carbon monoxide season - October, 1987. Coordination with Phoenix Metropolitan Chamber of Commerce - October, 1987 to February, 1988. Ongoing efforts.

- Maricopa Association of Governments agrees to support the Voluntary No Drive Days Program as well as other appropriate programs in the 1988-89 carbon monoxide season.

- Phoenix Chamber of Commerce and Regional Public Transportation Authority commit to serve as the coordinating entities for the Voluntary No Drive Days Program. The tentative goal of the program is a reduction in vehicle miles traveled in the metropolitan area of approximately four percent in 1988 and eventually increasing to ten percent by 1995. Program commencement - October, 1988 to January, 1989. Ongoing efforts.

- Regional Public Transportation Authority will assist the Phoenix Chamber of Commerce in the Voluntary No Drive Days Program. The Regional Rideshare staff will coordinate its current rideshare efforts with the No Drive Day activities to put together a consolidated promotional package that private employers can use. The general public awareness activities that will be sponsored by the Rideshare Program will also be tailored to fit into the No Drive Days plan. The Regional Rideshare staff will help the Phoenix Chamber to design the program and coordinate with other interested groups to insure that there is adequate coordination during the inversion season. Planning efforts began - May, 1987. Program implementation - October, 1987 to March, 1988. Program evaluation and planning for next year's program - April to May, 1988.

24. Areawide Public Awareness Program (Areawide Strategy)

- City of Avondale agrees to support the Phoenix Metropolitan Chamber of Commerce in the Areawide Public Awareness Campaign and will also conduct local publicity efforts beginning in September, 1987. Efforts will be ongoing.

- Town of Buckeye supports this measure.

- City of Chandler agrees to support the Public Awareness Program conducted by the Phoenix Chamber of Commerce during 1988-89.

- City of El Mirage supports this measure.

- Town of Gila Bend will continue its public awareness program by advertising in the local news media and our cable information channel.

- Town of Gilbert will make available coordination services and public facilities to facilitate areawide meetings and education forums. Time will be provided on the public access channel.

- City of Glendale will develop a clean air educational/awareness program to facilitate the implementation of carbon monoxide reduction measures. Program development will begin in August, 1987 and the program will be initiated in January, 1988.

- City of Goodyear agrees to support this effort. Goodyear will complement the regional campaign. Program development - July, 1988. Publications - Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa has developed a comprehensive public transit marketing plan for FY1987-88. The marketing plan includes media buying strategies, public service announcements and community involvement campaigns all aimed at encouraging the citizens of Mesa to use public transit as an alternative to the automobile. The City of Mesa has implemented the marketing plan.

- City of Peoria agrees to support the Phoenix Chamber of Commerce Public Awareness Campaign. Peoria will complement the regional campaign with a local program. Development of public awareness program - December, 1987. Ongoing coordination efforts.

- City of Phoenix supports this measure.

- City of Scottsdale Communications and Public Affairs Office working in conjunction with MAG, Maricopa County Health Department, and Regional Public Transportation Authority will support the public awareness/no drive day campaign conducted by the Phoenix Metropolitan Chamber of Commerce, and will institute a Scottsdale publicity campaign. Efforts will begin - July, 1987. Initiation of Scottsdale Public Awareness Program - August, 1987.

- Town of Surprise will cooperate with Maricopa County to increase citizen awareness of air pollution problems.

- City of Tempe agrees to support, individually and as a member of the Maricopa Association of Governments, the areawide public awareness program initiated by the Phoenix Metropolitan Chamber of Commerce and other Valley Chambers. The City will also cooperate with the Regional Public Transportation Authority in its public transportation and ridesharing informational programs. In addition, the City of Tempe will use programs already in place to provide citizens with information on air pollution, ridesharing, transit and other mitigation strategies. These ongoing programs include the TEMPE TODAY newsletter, the monthly Mayor and Council Breakfast program, as well as one-time and special events such as the Youth Town Hall which could use air quality as a theme. The City will also continue to provide on request, through its Speakers' Bureau, speakers to schools and community organizations to address the issues of air quality, public transportation, ridesharing, etc. Ongoing efforts.

- City of Tolleson supports this measure.

- Town of Wickenburg is committed to distribution of information to the public and the encouragement of the public to be aware of air quality problems.

- Town of Youngtown supports this measure.

- Maricopa County Division of Public Health will provide basic air quality data to all constituent members of MAG for use in Public Awareness Programs. Maricopa County will conduct a public awareness program in conjunction with interested parties and agencies to reach its citizens. County Public Information Office will continue to promote air quality awareness to county employees through coverage in the biweekly newsletter, the Insider and other internal notices. Efforts begin in May, 1987 and continue through August, 1988.

- The Maricopa Association of Governments agrees to support the public awareness program conducted by the Phoenix Chamber as well as other appropriate programs. The Phoenix Metropolitan Chamber of Commerce and the Valley chambers initiated an areawide public awareness campaign during the 1987-88 carbon monoxide season. The Phoenix Chamber intends to continue the public awareness program during the 1987-88 carbon monoxide season and possibly, expand the program to include a twelve month time frame. The Phoenix Chamber of Commerce is in the process of preparing a program implementation schedule for the 1988-89 carbon monoxide season.

- Phoenix Metropolitan Chamber of Commerce and Regional Public Transportation Authority will conduct a Public Awareness Campaign for the 1987-88 carbon monoxide season. This will be the second year of the Public Awareness Campaign. Campaign will begin in October, 1987 and continue through March, 1988.

- Regional Public Transportation Authority will be working in concert with other interested groups to assist in a year around public awareness campaign. Some specific elements that RPTA will be involved in include: development of a speaker's bureau to discuss ridesharing, transit, and the design of a rapid transit system; production of public service announcements on alternative modes of transit; posting of carpool signs on valley freeways to encourage carpooling; participation at public events (i.e. State Fair, transportation fairs) to promote ridesharing; taping interviews for local radio, television and cable stations; production of videos related to alternative transit modes for use by community groups, schools and businesses; and production of promotional materials for distribution at public events, shopping malls and other public display areas. Efforts began in March, 1987 and are ongoing.

25. Park and Ride Lots (Areawide Strategy)

- City of Avondale agrees to work with the Regional Public Transportation Authority and City of Phoenix to locate park and ride lots and assist in securing land in conjunction with private entities. Efforts will be ongoing.

- Town of Buckeye supports this measure.

- City of Chandler will support the inclusion of park and ride lots in the RPTA Regional Plan and projects under the Arizona Department of Transportation. Chandler will also develop park and ride lots along express routes, utilizing shopping centers, churches and local parks within Chandler.

- City of El Mirage supports this measure.

- Town of Gilbert will support park and ride lots consistent with the RPTA Plan as it is developed. Gilbert will cooperate in the identification, placement, and use of park and ride lots to support a public transit network.

- City of Glendale will advocate the inclusion of park and ride lots in the RPTA Regional Plan as well as ADOT projects. Glendale's General Plan, currently under review, includes park and ride lots. The General Draft Plan will be completed in the Summer of 1987.

- City of Goodyear agrees to work with the RPTA and City of Phoenix to locate additional park and ride lots and to provide assistance in securing land in conjunction with private entities. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa, RPTA and the City of Phoenix Transit Office will work together whenever necessary to locate additional park and ride lots. The City of Mesa will work with private businesses to encourage the dedication of parking spaces for Park and Ride use in existing and planned parking facilities. The City of Mesa has recently located an additional Park and Ride lot in Mesa at Gilbert Road and Southern Avenue. Ongoing efforts.

- City of Peoria agrees to work with the RPTA to locate additional park and ride lots and to provide assistance in securing land in conjunction with private entities. Peoria Community Center was designated as a park and ride location - January 26, 1987. Ongoing efforts.

- City of Phoenix Public Transit Department and RPTA will continue to assist ADOT to expand lots in new parkway, expressway, and freeway corridors. Phoenix will take necessary actions to implement a new Transit Center in the Sunnyslope area at a cost of $650,000. Over the next calendar year, final design and lease arrangements will be initiated for a new transit treatment at Westridge Mall at a cost of $100,000. Also during the next calendar year, engineering and design will begin on a new Express Bus Terminal to be located at Central Avenue and the Papago Freeway at a cost of $7,600,000. A Paradise Valley Mall Transit Center is budgeted at $230,000, as well as two as-yet-unlocated park and ride lots at $2,795,000.

- City of Scottsdale currently has seven Park and Ride lots. The City will continue to pursue lots and investigate opportunities for joint use of such facilities, particularly in new developments. Once a Park and Ride site is agreed upon by all concerned parties, implementation can occur in sixty to ninety days.

- Town of Surprise will provide parking as available for persons utilizing carpool, vanpool, or public transit facilities. Surprise will also review park and ride lots in conjunction with development plans.

- City of Tempe agrees to cooperate with the Regional Public Transportation Authority, the City of Phoenix Public Transit Department and the Arizona Department of Transportation in determining appropriate locations for new park and ride lots and in securing land (although available land in landlocked Tempe is extremely limited) or use of existing facilities for such lots. Presently in Tempe, there are park and ride lots located at: Dorsey north of Apache; Price and Southern (NE); Southern and Mill (SW); Southern and Rural (SW); Baseline and McClintock (NE); Warner and McClintock (SW); and 6th and Maple. The City is currently working with ADOT to assure the relocation of the existing park and ride lot at Southern/Price (scheduled for demolition) in the ADOT right-of-way at the Pima Freeway/Superstition traffic interchange and the construction of a new park and ride facility at the Warner Road/I-10 traffic interchange. Tempe and ADOT have recently identified and, through the RPTA and Phoenix Transit, secured use of a shopping facility parking lot for a park and ride lot for the new south Tempe express route. Vacant land for new lots, however, will be difficult and expensive to acquire since Tempe cannot expand its corporate limits and undeveloped land is scarce. Ongoing efforts.

- Maricopa County Highway and Planning and Development Departments concur with providing and encouraging the use of park and ride lots to enhance consolidation of vehicle trips along freeways or major arterials having an identified need. This planning principle has been retained on a permanent basis for incorporation into specific projects when justified. In addition, the County maintains monthly contact with ADOT for the valley freeway construction program, including provision of park and ride lots in unincorporated areas. Implementation of this measure has been completed. Maricopa County Highway Department will continue to monitor this as an ongoing activity.

- Arizona Department of Transportation has included in its Fiscal Year 1988-1992 Five-Year Transportation Facilities Construction Program the construction of a park and ride lot adjacent to Interstate 10 at 79th Avenue. In addition, a structure with high occupancy vehicle ramps accessing the interstate median will be constructed to enhance the system efficiency and usage of the 625 vehicle capacity park and ride lot. In addition, ADOT currently is studying potential sites for park and ride lots along the State Highway System and will provide the option as appropriate agencies of purchasing excess ADOT right-of-way for such use where appropriate. It is not anticipated that land specifically for the purpose of park and ride lots will be purchased by ADOT. However, ADOT will offer appropriate excess parcels for purchase by agencies wishing to implement such facilities. Efforts will begin in July, 1987 and construction will be completed by May, 1990.

- Regional Public Transportation Authority and City of Phoenix Public Transit Department will continue to assist ADOT in locating park and ride lots in new and existing parkway, expressway, and freeway corridors. In November, 1986, the RPTA established thirteen park and

ride locations for new regional bus service. These locations and potential new locations are continuously evaluated by the RPTA and City of Phoenix staff. Ongoing.

26. Financial Incentives Including Zero Bus Fares (Areawide Strategy)

- City of Avondale will review the recommendations made in the MAG Model Trip Reduction Ordinance and identify those incentives feasible to implement beginning in January, 1989.
- Town of Buckeye supports this measure.
- City of Chandler agrees to consider the provisions establishing financial incentives in lieu of parking spaces for employees who do not drive to the workplace, as part of the MAG Model Trip Reduction Ordinance. If so encouraged by the MAG Regional Council, the City of Chandler will review and adopt a tailored form of the Model Ordinance.
- City of El Mirage supports this measure.
- Town of Gilbert agrees to consider provisions establishing financial incentives in lieu of parking spaces for employers who actively include alternate transportation technology into the employee environment and as part of the MAG Model Trip Reduction Ordinance by January 31, 1988.
- City of Glendale Strategic Planning Department will conduct a study to identify those incentives feasible to implement. The results of this study will be shared with private employers. The study completion date is December, 1988.
- City of Goodyear will review the MAG Model Trip Reduction Study which will address this measure. Goodyear will then identify those incentives feasible to implement. Results of the study will be shared with private employers. Model Trip Reduction Study - December, 1988. Analyze results of study and consider for implementation - June, 1989.
- Town of Guadalupe supports this measure.
- City of Mesa agrees to study and implement the subsidization of bus passes for City employees who use public transit to travel to and from work. The City also agrees to meet with representatives of Mesa's largest employers and the Chamber of Commerce to encourage similar studies. Recommendations are being evaluated by the City Manager.
- City of Peoria will review the recommendations in the MAG Model Trip Reduction Ordinance and identify those measures feasible for implementation. Results of the study will be shared with private employers. Efforts will be conducted January, 1987 through January, 1989.
- City of Phoenix Rideshare Coordinator will assist Public Transit in its efforts to expand subsidized transit tickets to monthly transit passes. This effort should be completed by Fall, 1987. Phoenix Public Transit and Personnel staff with the assistance of the Air Quality Specialist and Rideshare Coordinator, will continue to provide approximately $100,000 in subsidized transit tickets/passes.

- City of Scottsdale Community and Economic Development will coordinate a program that will involve: 1) Allowing City Employees to work flexible schedules to coincide with bus service or carpools - July, 1987 to July, 1988. 2) Assisting Scottsdale Chamber of Commerce in developing incentive programs for employees - July to December, 1987. 3) Developing incentives for new employers who provide exceptional levels of support for public transit/ridesharing (dependent on a TSM Ordinance).

- City of Tempe has conducted a study of the possibility of providing subsidized bus/trolley passes to employees who take public transit to the workplace, and is in the process of developing a program to be implemented, subject to final Council approval, in FY 1988-89. It has sent letters to major private employers, as well as Arizona State University and the high schools, encouraging them to consider financial incentives and will undertake an additional similar mailing. An additional mailing will be made during the first quarter of FY 1988-89.

- Maricopa County Personnel Department agrees to initiate a program, with support of the Maricopa County Board of Supervisors, to give to Maricopa County employees a $15.00 per month County subsidy to be used solely for the purpose of defraying bus fares. Upon approval by the Board of Supervisors, the program of bus fare subsidy would be administered through the Employee Relations Division existing network of the County's Industrial Recreation Council (IRC) representatives. Initiate program - July, 1987. Financial proposal and resolution to the Board of Supervisors - August, 1987. Begin subsidy program - December 1, 1987. Program analysis - January to June, 1988.

- Arizona Legislature passed S.B. 1360 in 1987 which allows a tax deduction for employers who pay for public transit for their employees to and from work. Also, the bill authorizes the Director of the Department of Administration to promulgate rules to reimburse state employees if they use public transit to and from work. Counties may adopt ordinances to reimburse their employees for using public transit. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority and MAG Regional Rideshare staff will consult with employers to implement direct financial incentives that will encourage their employees to rideshare. Staff will attempt, whenever possible, to have employers subsidize 100 percent of cost for employee transit passes. If this is deemed inappropriate, we will try to convince employers to provide a $15 per month transit subsidy. This $15 per month is the most common subsidy used because of its status as a Federal non-taxable benefit and since it is not tax deductible at State level.

  Regional Rideshare staff will also work with employers to subsidize vanpooling for their employees. Although vanpooling holds no employer tax benefits, it still can reduce company parking expenses and localized congestion. RPTA will also work with legislative aides to determine if changes in state legislation can be made to make the allowable

subsidies for vanpool equal to those for transit. Materials will also be developed which explain the Federal and State tax benefits on subsidies. Proposed legislation will be monitored and communicated to clientele. Efforts began in March, 1987 and will be ongoing.

27. Preferential Parking for Carpools and Vanpools (Areawide Strategy)

- City of Avondale will review the recommendations made in the MAG Model Trip Reduction Study and consider the implementation of this measure beginning in January, 1989.

- Town of Buckeye supports this measure.

- City of Chandler agrees to consider this measure as part of the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. If so encouraged by the MAG Regional Council, the City of Chandler will review and adopt a tailored form of the Model Ordinance. Chandler agrees to consider provisions encouraging the establishment of preferential parking for carpools and vanpools, such as covered parking spaces and close-in spaces, as part of the ordinance.

- City of El Mirage supports this measure.

- Town of Gilbert will review the recommended solutions developed in accordance with the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program.

- City of Glendale will develop an internal policy to encourage carpooling and vanpooling among employees. Preferential parking in commercial and industrial areas will be addressed as part of the transportation element in the City's General Plan revision process. General Plan draft will be completed in the Summer of 1987 and the policy development will completed in December, 1987.

- City of Goodyear will review the results of the Model Trip Reduction Study which will address this measure and then consider implementation of this measure. Efforts will begin January, 1987 and continue through January, 1989.

- Town of Guadalupe supports this measure.

- City of Mesa is evaluating providing preferential parking for carpools and vanpools for the Town Center area. If warranted, the City of Mesa in conjunction with the Mesa Town Center Corporation agrees to provide parking for carpools and vanpools where feasible in the Town Center. The City will also work with the Mesa Chamber of Commerce to evaluate implementation of preferential parking for carpools and vanpools elsewhere in Mesa. The City is currently conducting an evaluation to determine feasibility of this measure.

- Town of Paradise Valley will implement this measure.

- City of Peoria will review the results of the MAG Model Trip Reduction Study and then consider implementation of this measure. January, 1987 through January, 1989.

- City of Phoenix Finance Department is working with the Rideshare Coordinator in developing a new City employee parking policy which will put increased emphasis on preferential parking for carpools and vanpools. The Finance Department and other appropriate staff, with the assistance of the Rideshare Coordinator, will develop and implement the policy.

- City of Scottsdale Community and Economic Development Department agrees to provide preferential parking for City employees who carpool immediately. Scottsdale will consider as part of the Model Trip Reduction Ordinance, an ordinance to require private employers to implement preferential parking policies for carpools and high occupancy vehicles. This would require approximately twelve months for implementation. Scottsdale will also work with the Chamber of Commerce in the development of a volunteer program which could be implemented by employers. This would require approximately six months for implementation.

- City of Tempe, in conjunction with implementation of the ridesharing program, has been studying the possibility of providing preferential City employee parking for carpools and vanpools, and a proposal to provide such parking has been developed. If approved, it will be implemented in FY 1988-89. The City has sent letters encouraging major employers, as well as Arizona State University and the school districts, to consider preferential parking programs, and it will conduct at least one additional mailing during FY 1988-89.

- Maricopa County Manager's Office has formed an ad hoc committee to investigate solutions to the parking problems at the Downtown Complex in Maricopa County. County employees have been surveyed and recommendations have been forwarded to the Board of Supervisors. Process is ongoing. Efforts began in 1985. 146 parking spaces reserved for carpoolers - 1981 to December, 1987. Reallocation of 100 additional parking spaces for carpoolers - January, 1988. Ongoing computer programming for parking space management - April, 1986 to June, 1988.

- Arizona Department of Transportation will provide preferential, close-in parking for employee carpools. ADOT has maintained this policy for many years and will continue to do so. In addition, information on public transit services is made available to employees. Ongoing efforts.

- Arizona Legislature passed S.B. 1360 which requires that State employees must be given preferential parking if they carpool or vanpool. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority and MAG Regional Ridesharing staff will attempt to convince all employers to provide preferential parking for their employees who carpool or vanpool. Rideshare staff will market this incentive during the company survey period and throughout the year to the maximum extent possible. Staff will also develop a guidebook to disseminate to employers explaining how to set up a preferential parking program as well as how to monitor its use. After analyzing the company's needs, Regional Rideshare staff

will explain to the employer which program they believe to be best suited for that particular company and try to obtain reserved spaces or parking areas, carpool/vanpool signs, or covered parking for carpools and vanpools. Ongoing.

28. Mandatory Parking Charges for Employees (Areawide Strategy)

- City of Avondale will review the results of the study and consider the implementation of this measure beginning in January, 1989.

- City of Chandler agrees to consider this measure as part of the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. Subsequent to approval by the MAG Air Quality Policy Committee and the MAG Regional Council, the City of Chandler will consider adopting a Trip Reduction Ordinance.

- Town of Gilbert agrees to review this concept as developed in accordance with the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program.

- City of Glendale will participate in the development of the MAG Model Trip Reduction Ordinance which will address Mandatory Parking Charges for Employees. Glendale will determine the feasibility of implementing this measure when the ordinance is completed. Efforts will begin in May, 1987 and continue through May, 1988.

- City of Goodyear will review the results of the MAG Model Trip Reduction Study which will address this measure and then consider implementation. Model Trip Reduction Study - December, 1988. Review the study recommendations and consider implementation -June, 1989.

- Town of Guadalupe supports this measure.

- City of Mesa will review and decide whether to adopt the Model Trip Reduction Ordinance, which will address this measure, within ninety days after completion and approval by MAG. The Town Center Parking Management Program has been implemented and employees are being charged for parking.

- Town of Paradise Valley will implement this measure.

- City of Peoria will review the results of the MAG Model Trip Reduction Ordinance which will address this measure and then consider implementation January, 1987 through January, 1989.

- City of Phoenix supports this measure.

- City of Scottsdale will continue to assess the feasibility of this measure and will implement the measure if it is appropriate and feasible to do so.

- City of Tempe agrees to continue to evaluate the possibility of imposing mandatory parking charges for its employees. Evaluation will continue throughout fiscal year 1988-89 and will take into consideration

the outcome of the Regional Public Transportation Plan vote in early 1989 as well as the elements of that plan which would provide greater public transit accessibility to City employees.

- Regional Public Transportation Authority will have a representative on the MAG Working Group which will assist the consultant in developing a workable model for this region. Once the model ordinance is complete, Regional Rideshare staff will work with the local governments and MAG to see that the system is adopted in the various jurisdictions. The rideshare staff is currently working with these local governments and the private sector to define their parking problems and begin to outline what incentives could be used to promote ridesharing for their employees. When the model is developed, the rideshare representatives will be able to take their existing information and incorporate it into the parking management design. Efforts began in June, 1987 and will be ongoing.

29. <u>High Occupancy Vehicle Lanes on Freeways (Areawide Strategy)</u>

- City of Avondale will encourage the Arizona Department of Transportation to include HOV lanes in the design of new freeways. Ongoing efforts.

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage ADOT to include HOV lanes in the design of new freeways where feasible on an ongoing basis.

- City of El Mirage supports this measure.

- Town of Gilbert agrees to encourage ADOT to incorporate HOV lanes into the development/design of the San Tan Freeway as it passes through Gilbert, as well as encourage use of such designs in the urban freeway system.

- City of Glendale will support initiatives by MAG and the RPTA to get ADOT to include HOV lanes in the system. Ongoing efforts.

- City of Goodyear agrees to encourage ADOT to include HOV lanes in the design of new freeways. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge and work with ADOT to carefully determine the locations and proposed funding sources for HOV lanes on new freeways. HOV lanes should be based upon careful long range planning to avoid excessive expenditures. Ongoing.

- City of Peoria agrees to encourage ADOT to include HOV lanes in the design of new freeways. Ongoing.

- City of Phoenix will aggressively work with the Arizona Department of Transportation and the Regional Public Transportation Authority toward the inclusion of additional HOV lanes on new freeways.

- City of Scottsdale agrees to ask the Arizona Department of Transportation to provide separate high occupancy vehicle lanes on all new freeways which are built to serve Scottsdale residents and businesses. Over fifteen miles of the Outer Loop Freeway will be built over the next fifteen years. Almost $3 billion has been earmarked by Maricopa County voters for the construction of a new set of freeways in Maricopa County. Efforts will begin in January, 1987. Ongoing.

- Town of Surprise will support the provision of high occupancy vehicle lanes on new freeways.

- City of Tempe agrees, individually and through the Maricopa Association of Governments and the Regional Public Transportation Authority, to encourage the Arizona Department of Transportation to include high occupancy vehicle lanes in the design of new freeways where feasible, given right-of-way requirements and other design considerations. Ongoing.

- Maricopa County Highway Department will coordinate with ADOT to ensure consideration of this measure as appropriate in county areas.

- The Arizona Department of Transportation has included in its Fiscal Year 1988-1992 (and prior) Five-Year Transportation Facilities Construction Programs the construction of sixty miles of high occupancy vehicle lanes in key central freeway corridors by 1995. The location of these projects and timing of completion are shown under the implementation schedule below. In addition, ADOT will evaluate the use of high occupancy vehicle lanes and/or bypass entrance ramps for all freeway/expressway corridors. High occupancy vehicle lanes have been evaluated for the Black Canyon and Maricopa Freeways in a study completed in December, 1986. The option for high occupancy vehicle lanes or bypass ramps is currently under investigation for each new freeway/expressway corridor being studied by ADOT for implementation in the MAG area. Fourteen miles of HOV lanes have been constructed as part of I-10 completion between 83rd Avenue and 17th Avenue - Completed. Twenty miles of HOV lanes are under or nearing construction as part of I-10 completion between 27th Avenue and 40th Street. This facility is expected to be open to traffic by 1990 - Open in 1990. Six miles of new HOV lanes are programmed for FY 1988 as part of an effort to improve I-10 between 40th Street and Southern Avenue. Design is now underway on this project - Open in 1990. Twenty miles of new HOV lanes are planned as part of the East Papago Freeway. Portions of this facility are now under construction, while other sections are under or nearing design. This facility is tentatively scheduled to be fully completed by 1994 - Open in 1994.

- Regional Public Transportation Authority is working with the City of Phoenix and ADOT on developing strategies for the operation of regional bus services on the freeway system. Included in the planning for these operations is the use of HOV lanes where they are provided. Ongoing.

30. High Occupancy Vehicle Lanes on Existing Arterials as Appropriate

- City of Chandler will consider providing high occupancy vehicle lanes on existing arterials where appropriate.

- Town of Gilbert will consider providing HOV treatments on existing arterials where use of such lanes is part of a comprehensive transportation plan from within the territory as well as adjacent cities.

- City of Glendale will review this measure for implementation where appropriate once the short and long range transit improvements are completed.

- Town of Guadalupe supports this measure.

- City of Phoenix will maintain the existing bus only lanes on Central/First Avenues. Bus only lanes will be restored on Central Avenue upon completion of construction of the underground parking structure. Phoenix will continue to look for opportunities for additional applications of this measure. FY 1986-87 Operating Budget includes $400,450 to support ten full-time equivalent employees to evaluate additional traffic control measures, including this measure.

- City of Scottsdale Planning and Traffic Engineering Program will coordinate ongoing studies concerning the feasibility and appropriateness of providing high occupancy vehicle facilities on arterial streets in the city. Since the planning program also is responsible for implementing transit improvements, internal coordination and the proper sequencing of transportation improvements will be assured. Additional coordination will be required with the Regional Public Transportation Authority, Phoenix Transit, and neighboring municipalities. Efforts will be ongoing.

- Town of Surprise will support the provision of high occupancy vehicle treatments on existing arterials where appropriate.

- Maricopa County Highway Department supports the installation and use of high occupancy vehicle lanes on heavily traveled freeways and some major arterials. In general, traffic on the county highway system is not nearly as congested as the more dense urban traffic in incorporated municipalities. Consideration of HOV lanes, as appropriate, will be part of Maricopa County Highway planning policies. At present there is no location in the existing Maricopa County Highway System for which HOV lanes might be feasible. When the need can be shown relative to a particular project, the feature will be included as appropriate.

31. High Occupancy Vehicle Ramps Which Bypass Freeway Ramp Metering Signals (Areawide Strategy)

- City of Avondale will recommend and support ramps in construction of transportation systems through Avondale. Time frame for implementation to be determined by the Arizona Department of Transportation..

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage the Arizona Department of Transportation to provide HOV bypass ramps where appropriate and feasible on an ongoing basis.

- City of El Mirage supports this measure.

- Town of Gilbert actively endorses the use of the urban interchange design for the San Tan Freeway through Gilbert. Gilbert agrees to work with ADOT to secure freeway access and exit technology which will minimize traffic delays. Ongoing through the year 2015.

- City of Glendale will recommend and support ramps in construction of the transportation system through Glendale. Ongoing efforts.

- City of Goodyear will recommend and support ramps in the construction of transportation systems through Goodyear.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge the Arizona Department of Transportation to study and implement where feasible bypass ramps for high occupancy vehicles. Ongoing.

- City of Peoria will recommend and support ramps in construction of transportation systems through Peoria.

- City of Phoenix will continue to cooperate with and assist ADOT in the formulation of a Freeway Management System, which addresses this measure. Staff from Streets and Traffic Department will assist ADOT in these efforts.

- City of Scottsdale agrees to request the Arizona Department of Transportation to provide high occupancy vehicle ramps which bypass freeway ramp metering signals at all metered signals at all metered interchanges in the city. The planned Outer Loop in Scottsdale will have fifteen interchanges, all of which have the potential to provide separate bypass metering signals and ramps for high occupancy vehicles. Efforts began in June, 1987 and are ongoing.

- City of Tempe supports the use of high occupancy vehicle ramps which bypass freeway ramp metering signals and agrees, individually and through the Maricopa Association of Governments and the Regional Public Transportation Authority, to encourage the Arizona Department of Transportation to provide for such ramps where feasible and appropriate. Ongoing.

- Arizona Department of Transportation is giving consideration to constructing new freeway on-ramps of sufficient width to easily allow striping of HOV bypasses around ramp meters when warranted by traffic demands. These extra wide ramps are to be included in Outer Loop elements now under construction (seven miles), Outer Loop elements under design (twelve miles), and Hohokam/East Papago Extension facilities nearing design (thirteen miles). High occupancy vehicle lanes have also been evaluated for the existing Black Canyon and Maricopa Freeways in a study completed in December, 1986. In

June, 1987 a bypass around the ramp meter on the southbound I-17 on-ramp at Dunlap Avenue was opened for buses. Complete design of Outer Loop elements now under design and elements of Hohokam/East Papago nearing design - July, 1991.

- Regional Public Transportation Authority is working with City of Phoenix staff to develop queue jumper plans for both transit vehicles and carpools, and is proposing to use these as a major marketing tool. Ongoing.

32. Mitigation of Freeway Construction Impacts (Areawide Strategy)

- City of Avondale will request that the Arizona Department of Transportation implement a construction mitigation program on freeways. Implementation time frame to be determined by ADOT.

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage ADOT to take all feasible measures to reduce negative impacts of freeway construction on air quality on an ongoing basis.

- City of El Mirage supports this measure.

- Town of Gilbert supports active control and minimizing the interruption of traffic flow throughout the freeway construction process. Ongoing through the year 2015.

- City of Glendale will request that the Arizona Department of Transportation implement a construction mitigation program on freeways.

- City of Goodyear will request that ADOT implement a construction mitigation program on freeways.

- Town of Guadalupe supports this measure.

- City of Mesa will encourage ADOT to implement a construction mitigation program on new freeway construction. The twenty year freeway construction program is determined by ADOT.

- City of Peoria will request that ADOT implement a construction mitigation program on freeways.

- City of Phoenix, under contract with ADOT, will provide interim bus service paralleling I-17 during construction of the I-10/I-17 Interchange until January, 1988 at a cost of $163,000. Phoenix will respond to future requests by ADOT to contract for additional interim transit service.

- City of Scottsdale will urge the Arizona Department of Transportation, the development agency, to mitigate the negative impacts of construction on air quality. Concern has been expressed about the negative air quality impacts of this construction activity. ADOT uses an extensive fleet of water trucks to water down the exposed earth to

prevent dust and reduce the concentration of other air pollutants. Other erosion and sedimentation control measures, such as project sequencing and scheduling to reduce air pollution also will be investigated. Efforts will begin in June, 1987 and are ongoing.

- City of Tempe agrees to encourage the Arizona Department of Transportation to take all reasonable measures to reduce the negative impact of freeway construction on air quality - i.e., dust reduction measures, detours constructed in a manner not to impede traffic unnecessarily, etc. - and to cooperate with ADOT in undertaking those measures where appropriate. Ongoing.

- Arizona Department of Transportation will maintain a drive information program which mitigates the degree of traffic congestion resulting from freeway and expressway construction. Starting in March, 1986, this type of program was effectively applied by the ADOT Community Relations Office to lessen the disruption resulting from the construction of the new freeway-to-freeway interchange between Interstate Routes 10 and 17. This program was recommended, together with traffic flow improvements and localized transit and ridesharing promotion, in a study of transportation system management options for mitigating traffic disruption in the I-10/I-17 construction area. Similar public information efforts will be pursued in the future as appropriate, to mitigate the traffic impacts of constructing other new freeways and expressways in the MAG area.

  Specific activities included in this effort involve production and airing of advertising campaigns for flex-time, carpooling, bus ridership, freeway driving tips, and driving only whenever absolutely necessary. Also, a major public information campaign for the State Fair to identify alternative routes and promote use of alternative modes will be pursued. Ongoing efforts will be directed at daily construction alerts, civic presentations, and monthly traffic system management meetings. New freeway driving tip brochure - July, 1987. Production of Fall advertising campaign and survival guide to freeway construction - August, 1987. Airing of campaign for flex-time, carpooling, and bus ridership - September, 1987. Plan mitigating measures for State Fair traffic - October, 1987. State Fair campaign for alternative routes, carpooling, flex-time, and bus ridership - November, 1987. Daily construction alerts - Ongoing. Presentations on freeway driving tips, flex-time, carpooling, bus ridership - Ongoing. Meetings of Traffic System Management Implementation Committee and TSM Marketing Committee - Ongoing.

33. & 34. <u>Freeway Surveillance, Ramp Metering, and Signage (Areawide Strategy)</u>

- City of Avondale will request that the Arizona Department of Transportation implement a construction mitigation program on freeways. Implementation time frame to be determined by ADOT.

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage ADOT to install traffic surveillance and control systems and ramp metering where feasible on an ongoing basis.

- City of El Mirage supports this measure.

- Town of Gilbert agrees to work with ADOT to secure freeway access and exit technology which will minimize traffic delays. Ongoing through the year 2015.

- City of Glendale will develop a computerized monitoring program to track the progress made by ADOT with the implementation of this measure.

- City of Goodyear will request that ADOT implement a construction mitigation program on freeways.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to urge and work with ADOT to implement a freeway surveillance and control system. Ongoing efforts.

- City of Peoria will request that ADOT implement a construction mitigation program on freeways.

- City of Phoenix Streets and Traffic Department will continue to work with ADOT on the design of this system to insure proper interface with traffic flow on major streets.

- City of Scottsdale has contacted the Arizona Department of Transportation and has convinced the department to design and provide the necessary conduit and necessary pavement loops for ramp metering. While the standard design specifications do not include the fixtures themselves, a low cost opportunity is provided for the surveillance equipment when it is required in the future. The City of Scottsdale agrees to request the Arizona Department of Transportation to provide the complete set of freeway monitoring devices, meters, causes and electronic signs "up front" as the facility is under construction. Efforts will begin in June, 1987 and will be ongoing.

- City of Tempe agrees, individually and through the Maricopa Association of Governments, to encourage the Arizona Department of Transportation to install traffic surveillance and control systems and ramp metering on freeways where feasible and appropriate, to ensure a free flow of traffic. These measures should be used where the installation of such measures would not result in unacceptable traffic backup on ramps and/or increased congestion on arterials. Ongoing.

- Arizona Department of Transportation will install loops and conduits in new freeways to facilitate the installation of ramp meters as traffic volumes warrant. In the existing I-17/I-10 corridor, funds have been programmed over the next five years for installation of an extensive freeway management system which may include a control center, detector loops, call boxes, TV cameras, variable message signs, lane control signs, intersection controllers, and ramp meters. Several variable message signs already have been installed to advise motorists of accidents, lane closures, and suggested alternative routes as a strategy to mitigate adverse traffic impacts resulting from road

construction in the I-10/I-17 corridor. This system has been studied extensively in a report completed in December, 1986, and the system will be under design in 1988.

- Regional Public Transportation Authority and City of Phoenix staff will continue to work with ADOT on the design of this system to insure proper interface with traffic flow on major streets. Ongoing.

35. Computerized Synchronization of Traffic Signals

- City of Avondale proposed working with the City of Goodyear in studying the efficiency and feasibility of a synchronization traffic signal system. Implementation time frame to be determined by both governmental entities.

- City of Chandler agrees to implement a computerized traffic signal system where feasible and appropriate.

- Town of Gilbert will actively work with surrounding communities in developing a comprehensive, integrated system of computer synchronized traffic controls.

- City of Glendale currently has a computerized, synchronized traffic signal system and will continue to expand the system as development occurs. Glendale is already in compliance with the 1987 Arizona air quality legislation. Glendale supports a regional study to determine the feasibility of an areawide, coordinated traffic system so that there will also be maximum synchronization at intersection along municipal boundaries. Ongoing.

- City of Goodyear Planning Department will study this measure along with the implementation of reversible lanes on arterials and one way streets. Initiate study - November, 1988. Council consideration of results - July, 1989.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to continue work on implementing the use of computerized synchronization of traffic signals for major arterial streets. Current plans call for computerized signalization of 75+ arterial street miles with 200 intersections having signals being computerized. Out of the 200 signalized intersections the City is responsible for maintaining, 143 are under system control. The remaining 57 intersections are scheduled to be under system control by October 1988. This will be followed by a fine tuning of the timing plans, which could take up to three months.

- Town of Paradise Valley will implement this measure.

- City of Peoria Public Works Department and Engineering Department will conduct a study to determine the feasibility of the coordination of groups of signals; the system timing of pre-timed signals; and the advanced master control of signal systems. Ongoing study.

- City of Phoenix will upgrade the communication system portion of the centralized computer managed signal control system during FY1987-88. Thirty-five additional traffic signals will be placed under computer control during FY1987-88. Included in the FY1987-88 Capital Improvement Program budget is $158,100 for upgrading and expanding the communication system.

- City of Scottsdale is currently negotiating a contract with a consulting traffic engineer to accomplish a comprehensive revision of the current utilization of the system. After the current system is optimized, a trial period will be provided to evaluate the effectiveness of the current system. Pending the result of this evaluation, either the existing system will be expanded or a new system will be purchased. Complete contract negotiation - July, 1987. Efforts will continue through September, 1990.

- City of Tempe agrees to continue implementation of its computerized traffic signal system. The contract for the City's computerized traffic signal system which provides for synchronization was awarded in 1983. The City, as of June, 1987, had a total of 131 traffic signals in operation. Of these, 106 were under computer control as of December, 1986; eleven have been brought under control in the first six months of 1987 for a total of 117; and the remaining thirteen are scheduled to be placed under control by the end of fiscal year 1987-88. All new signals are placed under control at the time of installation. Ongoing.

- City of Tolleson supports this measure.

- Maricopa County Highway Department supports the use of synchronized traffic signals on both city and county systems. In addition, ARS 49-474.01 requires synchronization of county traffic signals on county roadways having a traffic flow exceeding fifteen thousand motor vehicles per day. It is not believed, however, that synchronization is technically feasible where spacing between adjacent signals exceeds 1/2 mile. In addition, synchronization in both traffic directions is sometimes physically impossible when signal spacings are incompatible. Compliance with ARS 49-474.01 will require an analysis of the Maricopa County signalized intersections, the daily traffic of each intersection, and whether or not each signalized intersection exceeding 15,000 ADT can be synchronized. Synchronization equipment must then be installed as necessary. Complete analysis to identify signalized county intersections requiring synchronization - July, 1987. Complete installation of synchronization equipment at signalized intersections requiring synchronization and for which synchronization is physically possible - March, 1988.

- Arizona Department of Transportation, as mandated by S.B. 1360 (Omnibus air quality - Chapter 365), will pursue synchronization of traffic signals on State Highways in the nonattainment area in cooperation with local municipalities. Typically, on urban portions of State Highways, local governments handle traffic control through an agreement with ADOT.

  ADOT will survey State Highway System mileage in the nonattainment area to determine the current synchronization status of municipal

systems affecting State Routes. Based on appropriate criteria, those segments of the State System needing synchronization or upgraded signal coordination will be identified and programmed for improvement. Effective date of S.B. 1360 - August, 1987.

- Arizona Legislature passed S.B. 1360 which requires that cities, counties and the state must synchronize traffic control signals on roads in a nonattainment area which exceed 15,000 vehicles per day. S.B. 1360 effective date - August, 1987.

36. Reversible Lanes on Arterials

- City of Avondale Public Works Department will study the efficiency and identify any appropriate situations where reversible lanes could be installed. Research process/identification of potential lanes: January, 1989 and Implementation if appropriate: July, 1989.

- Town of Gilbert agrees to review its transportation plans and development guidelines to use reversible lane arterials where such an approach results in improved traffic flow, reduced congestion, and represents compatibility with the transportation plan.

- City of Glendale General Plan will address the issue of reversible lanes and an engineering review will also be conducted. The reviews will then be presented to the City Council. The General Plan will be completed in the Summer of 1987, the engineering review will be completed in the Fall of 1987, and Council consideration will be in the Winter of 1988.

- City of Goodyear Planning Department will study the efficiency of this measure and identify any appropriate situations where reversible lanes could be used. Initiate study - November, 1988. Council consideration of results - July, 1989.

- Town of Guadalupe supports this measure.

- City of Mesa will identify any appropriate streets where reversible lanes would result in traffic flow improvements. A recent study conducted by the City of Mesa indicates that reversible lanes are not warranted at present. Reevaluation will be made periodically.

- City of Peoria Public Works and Engineering Department will study the efficiency of this measure and identify any appropriate uses of reversible lanes. Study completion - October, 1988. Decision on study - February, 1988.

- City of Phoenix will maintain the existing reverse lanes consistent with the maintenance of all traffic control on Phoenix streets. Striping is reaccomplished every four months or as needed, and signing is maintained as needed. Future reverse lanes will be installed wherever and whenever doing so would be beneficial. The FY 1987-88 Operating Budget includes $10,000 for the existing reverse lanes striping and two Equipment Operators, and $7,000 for the existing reverse lanes signing.

- City of Scottsdale's Downtown Plan adopted in 1983 includes a major couplet street system that surrounds the downtown by curving off of Scottsdale Road in the vicinities of Osborn Road and Camelback Road. The easterly leg of the couplet provides three northbound lanes and two southbound lanes, while the westerly leg provides three southbound lanes and two northbound lanes. The traffic signals will be timed to provide progression in the direction with the most lanes. Partial completion of 70th Street Bridge - September, 1987. Couplet will be in operation - 1995.

- City of Tempe agrees to evaluate existing traffic splits and traffic control configurations and based on that evaluation, consider implementing reversible lanes on arterials where appropriate. The City will conduct an evaluation of existing traffic patterns and traffic control configurations during fiscal year 1987-88, with the intent of bringing any recommendations concerning reversible lanes before the Council by the fourth quarter of the year. The City cannot commit to implementing reversible lanes until the study is completed; there are conditions on major arterials which may operate against the use of reversible lanes - i.e., the extensive use of left turn signals, the actual traffic splits, etc. However, it is an option which will be explored.

- Maricopa County Highway Department concurs with the policy of providing reversible lanes as appropriate. Traffic safety is a major issue when installing reversible lanes unless physical barriers are present to eliminate the change of operator error in using the lane at the wrong time. The preference is to provide additional traffic lanes and/or lane width, if possible. Maricopa County has no portion of its existing system for which reversible lanes are considered appropriate. It is presently in place as a planning principle. The concept is being retained as a permanent traffic management alternative.

37. <u>One Way Streets</u>

- City of Avondale proposes to work with the City of Goodyear in studying appropriate one way streets. Implementation time frame to be determined by both governmental entities.

- City of Chandler agrees to redesignate streets as one way where appropriate.

- Town of Gilbert agrees to review its transportation plans and development guidelines to use one way streets where such an approach results in improved traffic flow, reduced congestion, and represents compatibility with the transportation plan.

- City of Glendale will continue to study the feasibility of this measure for implementation and conduct an engineering review. Study completed - Winter, 1988. Engineering review completed - Spring, 1988.

- City of Goodyear Planning Department will study this measure. Initiate study - November, 1987. Council consideration of results - July, 1988.

- Town of Guadalupe supports this measure.

- City of Peoria will conduct a study to coordinate the locations of one way streets with local and regional plans. Study completion - October, 1988. Decision on study - February, 1988.

- City of Phoenix will begin construction on a Fourth/Fifth Street crossover to implement a Third/Fifth Street one way pair around the Civic Plaza. Construction of the First Street crossover, to implement the First Avenue/First Street one way pair from Harrison to Roosevelt.

- City of Tempe agrees to re-examine the possibility of implementing one way couplets. Re-examination - FY 1987-88.

38. Truck Restrictions During Peak Periods

- City of Avondale agrees to consider the recommendation made in the MAG Model Trip Reduction Study and consider implementation.

- Town of Buckeye will adopt Truck Restrictions During Peak Periods within three months of final approval of the Model Trip Reduction Ordinance by MAG.

- City of Chandler agrees to consider this measure as part of the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. If so encouraged by the MAG Regional Council, Chandler will review and adopt a tailored form of the Model Ordinance.

- City of El Mirage will adopt truck restrictions as a part of the trip reduction ordinance within three months of final approval of the model by MAG.

- Town of Gilbert supports the development of the MAG Model Trip Reduction Ordinance and Coordinated Parking Management Program. This measure will be addressed in accordance with the ordinance.

- City of Glendale will participate in the development of the MAG Model Trip Reduction Ordinance which will address this measure. Glendale will determine the feasibility of implementing this measure when the ordinance is completed May, 1987 - May, 1988.

- City of Goodyear agrees to review the Model Trip Reduction Study recommendations and consider implementation of this measure. Efforts began January, 1987 and continue through January, 1989.

- Town of Guadalupe will adopt the MAG Model Trip Reduction Ordinance within three months of MAG adoption. Guadalupe will assume all costs associated with the adoption of the ordinance.

- City of Mesa will consider implementing any recommendations in conjunction with the MAG Model Trip Reduction Ordinance that are determined to be feasible. In addition, the City Council has adopted an ordinance to regulate truck traffic on residential streets. The City of Mesa will review and decide whether to adopt the ordinance within 90 days after its completion and approval by MAG.

- City of Peoria agrees to review the recommendations for the MAG Model Trip Reduction Study and consider implementation of this measure in January, 1987 - January, 1989.

- City of Phoenix will continue to enforce truck restrictions contained in the Traffic Code.

- City of Scottsdale will review the results of the MAG Model Trip Reduction Ordinance and will implement those recommendations which it deems appropriate and feasible. Currently, truck traffic specifically related to excavation is limited to off-peak hour travel by the City of Scottsdale.

- City of Tempe will continue to study this issue during FY 1988-89, with the intent of submitting recommendations, if any, to the City Council during the latter half of the year.

39. Intersection Improvements

- City of Chandler agrees to continue its ongoing intersection/street improvements program and to work closely with the Arizona Department of Transportation on traffic interchanges. A number of intersection/street improvement projects have been identified and planned for implementation during the seven-year period 1988-95.

- Town of Gilbert is developing a five year capital improvements program which will propose a method of scheduling and funding these improvements. The 1987-88 budget reflects several major roadway and intersection improvements.

- City of Glendale will continue the Street Capital Improvement Program currently underway for the improvement of 62 intersections in 1987 through 1992.

- City of Goodyear will study and appropriate budget funds for intersection improvements. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to continue to study and appropriate funds for intersection improvements. This process is done on an annual basis as part of the budget process and Five Year Capital Improvement Program. Improvements are and will continue to be made on a annual and ongoing basis.

- Town of Paradise Valley will implement this measure.

- City of Peoria Public Works and Engineering Departments will continue to coordinate with the developers for the improvement of City intersections. Ongoing.

- City of Phoenix determines projects on a yearly basis and has included them in the FY1987-88 budget. Projects are usually constructed within eighteen months of selection.

- City of Scottsdale Traffic Engineering has an ongoing program of gathering traffic volumes, accident history, and intersection geometrics at locations throughout the City. This information is then utilized to determine deficiencies and appropriate improvements. Master Planning receives the recommendations and defines projects incorporating the improvements. Project Management receives the projects, completes the designs, and supervises the construction. The process is entitled "Bottleneck Projects" and is a continuous activity that is repeated annually. A newly established Citizens' Transportation Committee will provide additional recommendations for intersection improvements. Efforts will begin in June, 1987. Construction of projects - October, 1987-June, 1988. Prioritized list of projects (1988-89) submitted to City Council - May, 1988. The City of Scottsdale will conduct studies on two traffic signal operation investigations. The first study involves the development of a methodology for traffic signal removal. The second study will involve recommendations for "lag left turn" phases or "third car actuated lead left turn" phases. Efforts will begin in June, 1987. Study completion - October, 1987. Implementation will begin in November, 1987.

39. Intersection Improvements

- Town of Surprise has already initiated intersection improvements in areas where traffic studies indicate that a future problem may exist. Now arterial designs are being initiated to accommodate better traffic control as new roads are built.

- City of Tempe agrees to continue its ongoing intersection/street improvements program, subject to annual review of needs, and further, to work closely with the Arizona Department of Transportation to attempt to ensure traffic interchanges affected by new freeway construction are designed to operate at maximum efficiency. Ongoing. Seventeen intersection/street improvement projects were budgeted and scheduled for start-up or continuation at an estimated cost of $11,197,096 - FY 1986-87. Nine intersection/street improvement projects are budgeted and scheduled for start-up or continuation at an estimated cost of $5,126,000 - FY 1987-88. $42,252,400 in intersection/street improvements are projected, subject to annual review, for start-up or continuation during this four year period - FY 1988-89 through 1991-92.

- Town of Wickenburg will pursue an existing program of widening arterial streets and eliminating bottlenecks and intersectional jogs.

- City of Tolleson supports the improvements of intersections as appropriate to the situation. Right-of-way restrictions prohibit the city from making significant improvements to existing streets. However, with new development which includes street developments, the City will include these measures as appropriate when approving site plans.

- Maricopa County Highway Department has a current policy which includes the use of basic intersection improvement techniques such as adding or lengthening turn lanes, widening streets, left turn lanes, etc. as indicated in this Traffic Control Measure. These practices will be continued for the future.

- Arizona Department of Transportation Five-Year Transportation Facilities Construction Program for Fiscal Years 1987-1991 and Fiscal Years 1988-1992 includes a number of projects directed at intersection improvements. These projects facilitate turning movements, helping to maximize intersection capacities. Specific projects and their timing are identified below under the implementation schedule.

Location	Project	Year Programmed
Peoria Avenue at I-17	Construct left turn lanes	FY 87
Cactus Road at I-17	Construct left turn lanes	FY 87
Thunderbird Road at I-17	Construct left turn lanes	FY 87
Van Buren Street at 17th Avenue	Intersection improvement	FY 87
7th Street at I-17	Intersection and median improvement	FY 88
7th Avenue at I-17	Intersection and median improvement	FY 88
Savage Street at U.S. 60	Intersection improvement	FY 88
Lake Pleasant Road at SR 74	Replace right angle turn with a gentle continuous turn	FY 88
Dobson-Gilbert Roads at SR 360	Construct left turn lanes at five overpasses	FY 88
Indian School Road at I-17	Widen structure	FY 89
75th-59th Avenues at SR 85	Mill, replace course and modify intersection	FY 90

40. On-Street Parking Restrictions

- City of Avondale will continue to enforce its current ordinance which prohibits parking on major streets. Ongoing effort.

- City of Chandler prohibits on-street parking along most major arterials and will remove on-street parking on State Route 98 (Arizona Avenue) and Chandler Boulevard when warranted.

- Town of Gilbert is actively removing on-street parking through Downtown Gilbert on Gilbert Road and creating a pedestrian oriented area. There should be no parking along arterials or collectors with the implementation of this project.

- City of Glendale will continue to implement this measure where appropriate along arterials. Ongoing.

- City of Goodyear will continue to enforce the current ordinance which does not allow on-street parking on major city streets. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa has had a long time policy of prohibiting on-street parking along major arterials. Currently, Main Street is the only major arterial where on-street parking is permitted. The City will continue to prohibit on-street parking along major arterials. Ongoing.

- City of Peoria will continue to enforce the ordinance which prohibits on-street parking on major streets in Peoria. Ongoing.

- City of Phoenix will eliminate on-street parking consistent with the Six-Year Major Street Improvement Program. Parking is scheduled to be eliminated on McDowell from Central Avenue to 16th Street during FY 1987-88, and on Dunlap from Central to 7th Street during FY 1989-90, in conjunction with major street improvements. Phoenix is also analyzing removal of parking on selected collector streets to facilitate peak hour travel. Total cost of $5,368,000 at these two locations, as reflected in the Six Year Major Street Program.

- City of Scottsdale has recently removed on-street parking on two streets. The consequences of the street modification are being carefully monitored on the more major of the two streets. It is currently being contemplated for other locations throughout the City pending the results of the evaluation. Efforts began in August, 1986 and will continue through February, 1988.

- Town of Surprise has already removed parking from many streets. No additional on-street parking will be implemented.

- City of Tempe will have eliminated all on-street parking on major arterials by mid-September, 1987 with the following exceptions: 1) Mill Avenue: All on-street parking will be eliminated as part of the Mill Avenue improvement project, which is currently (June, 1987) underway and scheduled for completion by mid-September, 1987; and 2) Apache Drive from Price Road east to the City boundary (one-half mile): Although no exact date has been set for the elimination of on-street parking along this half-mile segment, it is anticipated that the removal of the parking will take place at the same time as or prior to the opening of the Tempe portion of the Pima Freeway.

- Maricopa County Highway Department currently has a policy which includes the restriction of on-street parking where needed to reduce traffic congestion and help traffic flow, where other alternatives may not be available. Otherwise on-street parking is normally permitted. These practices will be continued for the future. At present there is no need for any additional locations on the county system where on-street parking should be restricted for this purpose. This proposed measure has been fully implemented by Maricopa County.

41. Bus Pullouts in Curbs for Passenger Loading (Areawide Strategy)

- City of Chandler will continue to evaluate locations for pullouts where they facilitate, not impede, transit operations. One bus pullout is presently in use at the Northeast corner of Alma School and Elliot. Chandler also utilizes several deceleration lanes that serve as bus pullouts along Alma School Road. Additional bus pullouts will be considered along designated bus routes where adequate right-of-way is available.

- Town of Gilbert agrees to evaluate locations for pullouts and construct pullouts where right-of-way is available and where they facilitate, not impede, transit operations. Ongoing.

- City of Glendale Transit Plan and RPTA plans have and will provide for bus pullouts. Construction of planned bus pullouts will be a combination of the City (in existing developed areas) and by developers as part of the development process. Ongoing.

- City of Goodyear agrees to identify and establish appropriate bus pullouts in curbs through the Transportation Master Planning Process and the Development Review Process. Develop standards requiring appropriate bus pullouts - September, 1988. Ongoing.

- Town of Guadalupe supports this measure.

- Town of Paradise Valley will implement this measure.

- City of Peoria Engineering Department will use the standardized bus pullouts specification to accommodate transition of bus routes from city to city in the MAG area. Ongoing.

- City of Phoenix will construct approximately fifty bus pullouts annually in conjunction with major street construction consistent with the Six Year Major Street Improvement Program. Phoenix will be encouraging private construction of bus pullouts in conjunction with new developments. The City Council has approved a program for a private contractor to install up to 1,000 passenger shelters with advertising. The private capital investment will approximate $6,000,000 in making passenger waiting at bus stops more comfortable and convenient.

- City of Scottsdale is incorporating bus pullouts into all current and future major street widening projects. The City currently has seven bus pullouts and six more are planned in the near future. An additional section of the City's Design Procedures and Guidelines entitled "Transit Improvements" has been prepared to require private developers to include bus pullout construction when roadway construction is required due to the development of private property. Revisions to City ordinances are required to stipulate the defined improvements. The ordinance revisions are recommended in the draft version of the Short-Range Transportation Plan that is currently being reviewed by the City Manager's Office prior to review by the City Council. After the ordinance revisions have been accomplished, Project Review and Project Coordination will ensure that all public and private street construction projects will incorporate these transit improvements.

Hayden - Virginia to Osborn - roadway widening project that includes bus pullouts - June, 1987 through December, 1987. McDowell - 64th to 70th - roadway widening project that includes bus pullouts - July, 1987 to February, 1988. Scottsdale - Hummingbird to Eastwood - roadway widening project that includes bus pullouts - August, 1987 to January, 1988. Scottsdale - McDowell to Osborn - roadway widening project that includes bus pullouts - 1989. Ordinance revision, if deemed appropriate - January, 1988. Ordinance provisions incorporated into stipulations for zoning hearings presented to the City Council - March, 1988. Ongoing efforts.

- City of Tempe agrees to continue its ongoing program of evaluating locations for bus pullouts and constructing pullouts where need dictates and right-of-way is available and where they facilitate, not impede transit operations. Two bus pullouts have been constructed on River Parkway in the Arizona State University Research Park; one is in place on College Avenue, north of University Drive; and four are under construction as part of the joint City of Tempe/City of Phoenix/Maricopa County 48th Street project. The four previously planned as part of the Mill Avenue improvement project were eliminated after consultation with the RPTA. Given traffic volumes on Mill Avenue, it was concluded that these would act as significant impediments to transit operations. Other pullouts will be considered as part of street improvements projects along designated transit routes where adequate right-of-way is available and where they will facilitate traffic flow without substantially hindering transit operations.

- Maricopa County Highway Department concurs that bus pullouts should be provided on heavily traveled arterials to facilitate traffic flow in the curb lane for bus stopping. Maricopa County is not aware of any location on its system where traffic density requires construction of bus pullouts at present, although the lack of bus pullouts in the urban centers is believed to represent a significant traffic impediment. Maricopa County will join in encouraging urban jurisdictions to pursue the construction of bus pullouts to ease traffic congestion.

- Regional Public Transportation Authority and City of Phoenix staff work with cities to construct, where appropriate, bus pullouts in conjunction with major street construction and encourage private construction of bus pullouts in conjunction with new developments. Ongoing.

42. Increased Bicycle Use

- Town of Buckeye Planning and Zoning Department will develop a bicycle route plan, install bikeways along arterials as appropriate and include bike systems in subdivision developments (nine months to develop plan and nine months to develop amendment to Subdivision Ordinance). Construction will be ongoing, as appropriate.

- City of Chandler will implement the Parks and Recreation Master Plan, require developers to install bike paths in accordance with the Bike Path Plan, provided for connections of various bike path sections, and publish literature encouraging bicycle travel on an ongoing basis.

- City of El Mirage adopted a bicycle route plan as part of the City's General Plan. Development of required subdivision ordinance amendment - 9 months. Construction will be ongoing as appropriate.

- Town of Gilbert will continue implementation of the General Plan which calls for the installation of a townwide system of paths for pedestrians and bicycles. Developers will be required to install bike paths in accordance with the Plan as part of the plan review process. Gilbert will publish literature encouraging bicycle travel and outlining the plan and path location/interconnection.

- City of Glendale is currently developing a Master Bikeways Plan. Bicycle travel is also being addressed in the General Plan. Master Bikeway Plan completed - June, 1988. General Plan Draft completed - Summer, 1987. Compliance with 1987 Arizona air quality legislation - December, 1987.

- City of Goodyear Transportation Coordinator along with the Planning Director will review current regulations and study the implementation of a Bikeways Plan as part of the Transportation Master Plan. Goodyear will also encourage this measure through the local air quality media program. Efforts began in November, 1988 and are ongoing.

- Town of Guadalupe will develop and implement a Bicycle Route Plan within nine months of federal approval of this plan. Bicycle routes will be addressed as streets are being designed and developed.

- City of Mesa agrees to make as a high priority in the planning of future district parks, the importance of providing bicycle, pedestrian and riding trails. Diana Marsh, an ASU Master's candidate in Environmental Planning, is currently conducting a bike path plan for the City.

  Mesa is currently in the early planning stage of the 962 acre Spook Hill District Park. A citizen committee appointed to identify and prioritize needs for the park has recommended for providing hiking and riding trails (including bicycle) as its third highest priority. The park is scheduled to be designed over a six year period. Development of the park will occur over the next 10 to 15 years. The bike path study will be presented to the City Council in late April, 1988.

- City of Phoenix will continue to promote bike rallies in FY87-88. Brochures describing bike routes will be updated and distributed from Parks, Recreation, and Library Departments. A bike suitability map produced by the City Manager's Bicycle Task Force will be completed and distributed by FY1987-88. The City Manager's Bicycle Task Force will continue during FY1987-88 to coordinate City efforts toward improving bicycle use. The Rideshare Coordinator will work closely with the Parks Department to promote and encourage bicycle travel among City employees who can feasibly use that mode of transportation.

- City of Scottsdale has an ongoing program to encourage bicycle travel. The City has developed an extensive set of bicycle paths, especially along the nine mile Indian Bend Wash/Camelback Walk open space corridor. The Short Range Transportation Plan calls for four new bikeway segments: a 1.25 mile long Hayden Road bikeway which is already budgeted for next year, and three other priority one bikeways (Vista del Camino - 1.0 miles, 108th & Cholla - .5 miles, and Mescal parkat - .25 miles). Five other bikeway segments are called for under priority two on the Short Range Transportation Plan. The City's General Plan Circulation Element contains the blueprint for an extensive citywide bikeway system. The city has an extensive bicycle public relations program which includes the free distribution of over 3,000 bikepath maps each year. In addition, the City has created a Bikeways Task Force for the purpose of promoting bicycle use and safety. Efforts began in June, 1987 and will be ongoing.

- City of Surprise has constructed bicycle and pedestrian lanes in many areas of town. Pedestrian and bicycle lanes are protected by the Town Ordinance.

- City of Tempe agrees to continue its ongoing program of encouraging and supporting bicycle use through involvement of the bicycling community in the appropriate decision making processes and the construction of bicycle support facilities. The City of Tempe has a long history of encouraging bicycle use. A recent strategic planning survey conducted by Professor L. A. Wilson of ASU for the City showed that fourteen percent of the City's population relies on bicycling as its primary mode of travel. To ensure participation by the public, and members of the bicycling community in bicycle-related decision making, a Mayor's Advisory Bicycle Committee was created in 1985. In further recognition of the importance of the bicycling community, the bicycle committee was formally created by City Ordinance No. 86-65, adopted by the City Council on September 25, 1986. Appointments to that Committee were made on December 18, 1986. Staff support to the Committee is provided through the Community Services Department, and the Committee is active, meeting monthly, with minutes of all meetings referred to the City Council for review and approval. Currently the Committee is: reviewing existing bicycle ordinances; developing a bicycle routing system which will identify specific routes which can best and most safely be used by selected populations - e.e., school children, bicycle commuters, recreational riders, etc.; working with ASU to identify safe ingress and egress points to and from the campus; and preparing radio spots and other educational materials promoting safe bicycle use. As a long-term goal, the Committee is studying the possibility of converting canal banks and railroad right-of-ways into bicycle facilities.

  In addition, the City has in place an extensive bikepath system and is continuing to upgrade and expand that system. The Community Development Department, as part of its advance planning and General Plan Update, has prepared a bicycle facilities route map identifying and locating all elements of the Tempe bicycle system (bikepaths, bikeways, bike lanes, extended sidewalks, etc.) and is examining the role of bicycling within the overall transportation element in the General Plan. The revised General Plan, now in the final phases of consideration, heavily stresses both bicycle and pedestrian components.

The City also conducts an ongoing bicycle public information and enforcement program to ensure the safety of both the bicycling and driving public. The Police Department, through the City's Speakers Bureau, provides speakers on request for schools and community organizations to address the issue of bicycle safety. Bicycle safety information is periodically included in the City's newsletter (monthly circulation - 33,950 households) and a flier on the subject is produced by and provided through the Community Services Department. During 1986-87, the City at its expense bought advertisements promoting bicycle safety in each of the high school newspapers and in the ASU "State Press". Additionally, the Police Department carefully enforces laws governing bicycling. Ongoing efforts.

- City of Tolleson supports this measure.

- Town of Youngtown supports this measure.

- Maricopa County Department of Planning and Development is developing a Comprehensive Land Use Plan for the unincorporated portions of the County. Land Development goals and policies as well as a future land use map will be the product of the process. Adoption of certain transportation and land use policies will enable the Planning and Zoning Commission to encourage increased bicycle use. Amenities such as lockers and sheltered bicycle racks should be encouraged for use. Once the Comprehensive Plan is adopted, policies will be in place to allow the Planning and Zoning Commission and Board of Supervisors to continually address the issue of increased bicycle travel within the private development proposals that are approved. Efforts began in April, 1987. Plan adoption - September, 1988.

- Arizona Department of Transportation - Transportation Planning Division will participate in bicycle safety and education efforts involving the Governor's Arizona Bicycle Task Force and the Arizona State Parks Department. These efforts will focus on identifying and developing strategies to address bicycle safety and education issues.

  In addition, ADOT is willing to assist jurisdictions which plan to develop bicycle paths adjacent to new MAG freeway/expressway facilities in the near future. For example, ADOT will replace existing facilities which get displaced by controlled access development, provide required features to accommodate connections for future path facilities, and increase shoulder widths on frontage roads to accommodate planned path facilities. Develop Arizona bicycle design standards - July, 1987. Conduct educational workshop for public officials - October, 1987. Develop and conduct bicycle safety and education program - Ongoing. Identify and develop strategies to address bicycle safety and education issues - Ongoing.

- Arizona Legislature passed S.B. 1360 in 1987 which requires that cities over 50,000 population must include bicycle routes in the circulation and recreational elements of the general plan. Regulations governing subdivisions of counties must include bicycle facilities when providing for arrangement of streets and highways. Cities under 50,000 population and counties may include bicycle facilities in their plans. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority and the MAG Regional Rideshare staff at RPTA will assist employers and local jurisdictions in promoting "cyclocommuting." In conjunction with efforts to increase awareness of the benefits of sharing a ride and utilizing transit and park and ride lots, there will also be a concerted attempt to peak interest in the bicycle as a commute alternative. Efforts began in June, 1987 and are ongoing.

43. Bicycle Travel and Support Facilities

- Town of Buckeye Planning and Zoning Department will begin encouraging this measure during subdivision and development review once the General Plan is updated and the bicycle plan is prepared (nine months to develop plan and nine months to develop amendment to Subdivision Ordinance). Construction will be ongoing, as appropriate.

- City of Chandler will implement the Parks and Recreation Master Plan, require developers to install bike paths in accordance with the Bike Path Plan, provide for connections of various bike path sections, and publish literature encouraging bicycle travel on an ongoing basis.

- City of El Mirage adopted a bicycle route plan as part of the City's General Plan. Development of required subdivision ordinance amendment - 9 months. Construction will be ongoing as appropriate.

- Town of Gilbert development guidelines will be revised to require bicycle parking facilities at all office, commercial, industrial and residential multi-family complexes, shared recreation facilities and community recreation sites. Developers will be encouraged to provide additional support facilities within their sites, as feasible. Gilbert will incorporate support facilities into the overall recreation facilities plan.

- City of Glendale is currently developing a Master Bikeways Plan which will address support facilities. Compliance with the 1987 Arizona air quality legislation - December, 1987.

- City of Goodyear agrees to review existing regulations and develop appropriate standards through the Transportation Master Planning Process and the Development Review Process. Efforts begin in November, 1988 and are ongoing.

- Town of Guadalupe will participate with adjoining communities to develop or connect existing bike routes. Costs for support facilities will be borne by developers and the Town will seek funding for the construction of bike routes.

- City of Mesa agrees to make as a high priority in the planning of future district parks, the importance of providing bicycle, pedestrian and riding trails. Diana Marsh, an ASU Master's candidate in Environmental Planning, is currently conducting a bike path plan for the City.

Mesa is currently in the early planning stage of the 962 acre Spook Hill District Park. A citizen committee appointed to identify and prioritize needs for the park has recommended for providing hiking and riding trails (including bicycle) as its third highest priority. The park is scheduled to be designed over a six year period. Development of the park will occur over the next 10 to 15 years. The bike path study will be presented to the City Council in late April, 1988.

- Town of Paradise Valley will implement this measure.

- City of Peoria agrees to develop a citywide network of bicycle routes and bikeways. Peoria agrees to coordinate with and encourage developers and the Maricopa County Parks and Recreation Department to continue development of their system of bicycle routes. Ongoing efforts. Development of five year capital improvements plan for bicycling - August, 1987.

- City of Phoenix will implement the planning, design, and construction of selected bike routes. A new proposed bicycle route plan which delineates 400 miles of bike routes and facilities is proposed for incorporation into the City of Phoenix General Plan during FY 1987-88. During the current fiscal year 87-88, $230,000 from 1984 Parks, Recreation, and Library Revenue Bonds are programmed for development of additional bicycle trails. In addition, $463,000 of 1984 Parks and Recreation Bonds revenues have been designated for construction along the Arizona Canal Diversion of five bicycle/pedestrian underpasses at the intersections of selected streets to be cost shared with the Corp of Engineers and County Parks Department in 1988-89 for a total expenditure of $1.3 million. An underpass will also be provided at I-17 with funding from 1984 Park and Recreation Bonds and cost shared with the Corps of Engineers for $350,000. The total for the next five years is $2,343,000.

- City of Scottsdale has an ongoing program to develop bicycle travel and support facilities. The two most recently completed city buildings - the One Civic Center office building and the new corporation yard - both contain shower facilities. All city buildings have bike racks. The City expands the bikeway system primarily by conditional development approval. When developers zone and improve land, the required bikepaths are also provided. The Scottsdale Park and Recreation Program also builds and maintains bikeways in the parks and along the many open space corridors. Furthermore, several Scottsdale streets have been designated, marked and signed for bikeways. The Bikeways Task Force will explore other cycling improvements including private employer bicycle support facilities, cycle actuated traffic signals, improved signage and extra wide arterial lanes. Efforts began in June, 1987 and will be ongoing.

- City of Tempe agrees to continue its ongoing program of improving and expanding its existing bikepath system, subject to annual review of needs, and to continue study of providing additional bicycle-related facilities. It further agrees to work with the Arizona Department of Transportation in attempting to ensure that bicycle facilities are included in new freeway and freeway improvement designs.

The City of Tempe has in place an extensive bikepath system and is continuing to improve and expand that system based upon a comprehensive study of bicycle needs and desires. More than thirty miles of bikepaths are already in place. Eight-foot sidewalk/bikepaths are included in all major street improvement projects. Budgeted for 1987-88 are other bikepath improvements totaling $340,000, and projected for 1988-89 through 1991-92 are enhancements adding to an additional $1,731,000. Also, the General Plan Update, now under consideration, includes a strong bicycle component.

Furthermore, the City has a policy of actively promoting the inclusion of pedestrian/bicycle facilities in the design of any new freeways or freeway improvements planned in Tempe. The City secured agreement from ADOT to construct dual sidewalk/bicycle paths on the recently completed Warner Road/I-10 interchange and to provide eight-foot sidewalks/bicycle paths along both frontage roads on the Pima Freeway through Tempe. As a condition of its approval of the Papago Freeway, the City has insisted that provision by made for like facilities along the alignment as well as for pedestrian/bicycle access under/over the roadway.

The City currently provides bicycle racks at its public buildings for both employee and public use. Since the major park and ride lot in Tempe is being relocated due to freeway construction and a number of key bus routes are new and may require some routing adjustments, no action has been taken on the installation of bicycle racks or lockers in park and rides and at strategic locations on bus/trolley routes. The City will, however, during fiscal year 1987-88 explore the possibility of installing such facilities at those locations as a means of encouraging the use of bicycles to key transfer points. Ongoing efforts.

- Town of Wickenburg intends to develop bicycle paths and horse trails.

- Regional Public Transportation Authority and the MAG Regional Rideshare consultant will work with employers and local jurisdictions in developing easier accessibility for bicyclists, since the climate and topography are highly conducive to cycling. Safe, connecting bikeways and safe storage will greatly encourage usage. Efforts began in June, 1987 and are ongoing.

44. Pedestrian Travel

- Town of Buckeye Planning and Zoning Department will make adequate provisions during the construction of arterials and platting of subdivisions for pedestrian traffic. Construction will be ongoing, as appropriate.

- Town of Carefree will encourage pedestrian travel within its commercial core by integrating this measure with the preparation of the general plan. Development of common parking lots for the commercial core will be encouraged. The implementation schedule depends upon the development of that core by private owners.

- Town of Cave Creek will encourage pedestrian travel within its commercial area by integrating this measure with the preparation of the general plan. Development of common parking lots for the commercial area will be encouraged. The implementation schedule depends upon the development of property by private owners.

- City of Chandler agrees to evaluate bicycle and pedestrian needs and to implement bicycle and pedestrian-related improvements as need dictates on an ongoing basis. Chandler has an ongoing program of sidewalk widenings, installation of pedestrian signals and crosswalks, and construction of other pedestrian-related facilities. Chandler will also continue to require developers to provide sidewalk and pedestrian and bicycle pathways as part of the plan review process. Additional sidewalk improvements will be provided through improvement district projects.

- City of El Mirage will make adequate provisions for pedestrian travel during the construction of arterials and platting of subdivisions.

- Town of Gilbert General Plan development guidelines require the installation of adequate sidewalks throughout all types of development. The Plan also encourages the development of scaled commercial developments which would encourage pedestrian or bicycle traffic circulation to residential and commercial areas for convenient usage.

- City of Glendale is currently revising its General Plan which will address pedestrian travel. Awnings, benches, and trees are being added to encourage pedestrian travel. The design of new neighborhood shopping areas has also been modified to encourage pedestrian travel. General Plan draft completed - Summer, 1987. Downtown improvements completed - 1988. Ongoing efforts.

- City of Goodyear Transportation Coordinator along with the Planning Director will review current regulations and study the implementation of pedestrian amenities in new developments along with bikeways. Goodyear will also encourage this measure through the local air quality media program. Efforts began in November, 1988 and are ongoing.

- Town of Guadalupe will continue to encourage pedestrian travel. Adequate planning will be done for construction of arterials and sidewalk access will be addressed by the Planning and Zoning Department staff.

- City of Mesa, with the local downtown business community, has made a number of sidewalk and other improvements in its Town Center area designed to encourage pedestrian travel. Additional plans to encourage pedestrian travel are an integral part of the next major development in the downtown (Redevelopment Site #8).

  In addition, a recently completed study conducted by the Urban Design Assistance Team (UDAT) has recommended the development of pedestrian links across all irrigation canals and the establishment of a "desert walk" along overhead electrical easements. Ongoing efforts.

- Town of Paradise Valley will implement this measure.

- City of Peoria agrees to encourage pedestrian travel by incorporating sidewalks and walkways in the Comprehensive Master Plan. Ongoing.

- City of Phoenix will continue sidewalk improvements and installation of pedestrian signals at all signalized intersections in conjunction with major street construction. In addition to the costs included in major street construction, FY 1987-88 Operating Budget includes approximately $100,000 to support three full time employees to install and maintain pedestrian crossings. In the 1987-88 Operating Budget, an additional $102,000 has been provided for crosswalk maintenance, including two new full time employees.

- City of Scottsdale will continue to provide sidewalks and/or pathways as a condition of new development. The City's Park and Recreation division participates in the "Life: Be in It" exercise campaign which encourages walking. As a part of the review of new development proposals, staff, the Development Review Board, and the Planning Commission will continue to require pedestrian linkages between shopping, community service, and residential areas as a condition of development approval. In the Downtown area, specific design guidelines have been adopted which encourage physical links between buildings; the use of canal banks for pedestrian travel; the provision of covered walkways on arcades in front of new buildings; and landscaping to reduce temperatures, provide shade, and make walking more pleasant. Furthermore, the Civic Center Mall and strategically placed parking garages downtown encourage pedestrian travel. Efforts began in 1985 and will be ongoing. Scottsdale City Council endorsed measures to encourage pedestrian travel in June, 1987.

- Town of Surprise encourage pedestrian travel where feasible.

- City of Tempe agrees to continue its ongoing evaluation of pedestrian needs and to implement pedestrian-related improvements as need dictates. It further agrees to work with the Arizona Department of Transportation in attempting to ensure that pedestrian facilities are included in new freeway and freeway improvement designs.

  The City of Tempe has an ongoing program of sidewalk widenings, installation of pedestrian signals and crosswalks and construction of other pedestrian-related improvements. In addition to its continuing program of maintenance and repair - ie., replacement of broken curbs, gutters and sidewalks - the City schedules and budgets for the construction of improvements projects. A major sidewalk-widening project on Mill Avenue is currently underway and scheduled for completion in September, 1987, and two additional pedestrian/bicycle overpasses - across the Western Canal at Lakeshore Drive and at County Club Drive - are currently under design. The revised General Plan, now in the final phases of consideration, heavily stresses the pedestrian and bicycle components. Furthermore, the City has a policy of actively promoting the inclusion of pedestrian/bicycle facilities in the design of any new freeways or freeway improvements planned in Tempe. The City secured agreement from ADOT to construct dual

sidewalks/bicycle paths on the recently completed Warner Road/I-10 interchange and to provide eight foot sidewalks/bicycle paths along both frontage roads on the Pima Freeway through Tempe. As a condition of its approval of the Papago Freeway, the City has insisted that provision be made for like facilities along the alignment as well as for pedestrian/bicycle access under/over the roadway. Ongoing efforts.

- City of Tolleson supports this measure.
- Town of Wickenburg supports this measure.
- Town of Youngtown supports this measure.
- Maricopa County Department of Planning and Development is developing a Comprehensive Land Use Plan for the unincorporated portions of the County. Land development goals and policies as well as a future land use map will be the product of the process. Adoption of certain transportation and land use policies will enable the Planning and Zoning Commission to encourage pedestrian travel. Once the Comprehensive Plan is adopted, policies will be in place to allow the Planning and Zoning Commission and Board of Supervisors to continually address the issue of increased pedestrian travel within the private development proposals that are approved. Efforts began - April, 1987. Adoption of plan - September, 1988.

45. Pedestrian and Bicycle Overpass Where Safety Dictates

- Town of Buckeye supports this measure.
- City of Chandler agrees to consider the installation of pedestrian/bicycle overpasses where safety dictates on an ongoing basis. The City of Chandler adopted a Parks and Recreation Master Plan in October, 1986 which identified guidelines and principles for developing bikeways in Chandler.
- City of El Mirage supports this measure.
- Town of Gilbert agrees to consider requiring grade separations for pedestrian and bicycle traffic where safety dictates. Applicants seeking approval for new development will be encouraged to provide pedestrian and bicycle grade separations. Gilbert will request the Arizona Department of Transportation to address this issue in the planning of the San Tan Freeway.
- City of Glendale will request that ADOT address this issue in planning the design of the Paradise Corridor.
- Town of Guadalupe supports this measure.
- City of Mesa agrees to study opportunities to provide pedestrian and bicycle overpasses where safety dictates. This includes opportunities recently identified in the Urban Design Assistance Team study. Potential sites include school locations, major arterial streets, major employer locations, public recreation areas, Town Center area, etc. The City will explore the feasibility of providing overpasses along irrigation canals and/or overhead electrical easements.

The Urban Design Assistance Team Workshop was conducted February 6-10, 1987 after many meetings with citizens. The final report was presented to the City Council on June 19, 1987. The report will be studied during FY1987-88 for opportunities to incorporate recommendations in the City of Mesa General Plan update. Additional overpass sites will be identified on an ongoing basis.

- Town of Paradise Valley will implement this measure.

- City of Phoenix Streets and Traffic Department will continue to examine traffic and safety conditions to determine locations where such overpasses are needed. This is an ongoing activity reflected in the FY1987-88 Operating Budget.

- City of Scottsdale has in the past, and will continue to provide overpasses and/or underpasses which will enhance pedestrian or bicycle safety. These facilities often are provided by the private sector as a condition of development such as at the Adobe Ranch underpass on East Shea Boulevard. Others, such as the underpasses and overpasses along the Indian Bend Wash greenbelt, were provided by the City or the Army Corps of Engineers as part of the total recreation and flood management project. Efforts will begin in June, 1987 and will be ongoing.

- City of Tempe agrees to continue its ongoing evaluation of pedestrian needs and to consider installation of overpasses as need and safety dictate. The City has an ongoing program of sidewalk widenings, installation of pedestrian signals and crosswalks and construction of other pedestrian-related facilities, including overpasses where safety dictates. Overpasses are in place over the Superstition Freeway and over University Drive. Currently under design are overpasses across the Western Canal at both Lakeshore Drive and County Club Drive. The City also has a policy of actively promoting the inclusion of pedestrian/bicycle over or undercrossings, as appropriate, as well as pedestrian/bicycle paths on bridges and along frontage roads in new freeway or freeway improvement designs. As a condition of its approval of the Papago Freeway, the City has insisted that provision be made for pedestrian/bicycle over or undercrossings at strategic points along the alignment. Ongoing efforts.

46. Conversion of Buses to Alternative Fuels and Use o Electric Buses for Shuttle Service (Areawide Strategy)

- Town of Buckeye supports this measure.

- City of Chandler will review the recommendations in the MAG Alternative Fuels Feasibility Study and then determine how best to encourage the conversion of buses to alternative fuels. Ongoing.

- City of El Mirage supports this measure.

- Town of Gilbert will review the recommendations included in the MAG Alternative Fuels Feasibility Study to determine how best to encourage the conversion of buses to alternative fuels.

- City of Goodyear Transportation Coordinator will review the MAG Alternative Fuels Feasibility Study as a basis for conversion to alternative fuels in the future.

- Town of Guadalupe supports this measure.

- City of Mesa's public transit bus fleet (Mesa Sunrunner) is owned and operated by a private transportation company. The City of Mesa would have to assume the costs of converting the fleet to compressed natural gas (CNG). Implementation is contingent upon finding a fuel source for the CNG-converted vehicles, agreement by the contractor to convert the vehicles and the availability of State Air Quality funds. The Department of Environmental Quality, Air Quality Division anticipates requesting grant proposals in June, 1988 and having funding available at the end of the Summer, 1988.

- City of Peoria supports the study being conducted by MAG.

- City of Phoenix Public Transit Department has included the purchase of two methanol fueled buses in its program for 1987-88 and Phoenix Transit has converted one bus to compressed natural gas fumigation. Phoenix Transit has also included an upgrade to diesel fuel number one in its 1987-88 contract which will reduce particulates in the emissions of the entire fleet.

- City of Scottsdale will continue to review and assess the feasibility of this measure. Scottsdale will adopt it if and when it is found to be appropriate and feasible.

- Town of Surprise will implement this measure when these fuels become feasible.

- City of Tempe, as a member of the RPTA, agrees to support the efforts of the RPTA and City of Phoenix Transit Department to assess the feasibility of converting buses to alternative fuels. The City of Tempe does not own any buses. Ongoing efforts.

- Arizona Department of Transportation, as mandated by S.B. 1360 (Omnibus air quality - Chapter 365), will conduct a study of ten percent of its non-diesel and non-public safety motor vehicle fleets operating in the nonattainment area to determine how they perform with respect to driveability using clean burning fuels. Vehicles will be representative of the fleet. Also, as mandated by H.B. 2115 (Clean burning fuels, blends, pilot project - Chapter 139), ADOT will conduct a pilot project to determine the cost and effect of using clean burning fuel in motor vehicles. ADOT will designate certain ADOT motor vehicles which will be operated with clean burning fuel and monitor the motor vehicles to determine: the cost of maintaining a motor vehicle operated with clean burning fuel; the effect on miles-per-gallon of a motor vehicle operated with clean burning fuel; the availability of clean burning fuel; and the impact of clean burning fuel on vehicle emissions. Report findings on clean burning fuels pilot project (H.B. 2115) - October, 1988. Report findings on driveability test (S.B. 1360) - November, 1988.

- Arizona Legislature passed S.B. 1360 in 1987 which requires all buses purchased after January 1, 1990, to use clean burning fuels. Cities will report their efforts to convert buses to clean burning fuels. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority will work with its contractor, Valley Coach, and the City of Phoenix Public Transit Department and its principal contractor, Phoenix Transit, to continue to study the feasibility of converting buses to alternative fuels. The City of Phoenix Pubic Transit Department has included the purchase of two methanol-fueled buses in its capital program for fiscal year 1987-88, and Phoenix Transit has converted one bus to compressed natural gas operation. Phoenix Transit will also upgrade from diesel fuel number two to diesel fuel number one in fiscal year 1987-98. This will reduce particulate emissions for the entire fleet.

47. Use of Emissions Control Devices on Public Diesel Powered Vehicle (Areawide Strategy)

- City of Avondale will monitor technological changes in the use of emission control devices to determine availability of these devices.

- Town of Buckeye supports this measure.

- City of Chandler will review the recommendations in the MAG Alternative Fuels Feasibility Study to determine how best to encourage the conversion of buses to alternative fuels.

- City of El Mirage supports this measure.

- Town of Gilbert will review the recommendations included in the MAG Alternative Fuels Feasibility Study. Gilbert Public Works Department would be responsible for conversion/installation of economical and effective control devices.

- City of Glendale will monitor technological changes in this area to determine appropriate availability of high quality devices.

- City of Goodyear Transportation Coordinator will monitor technological changes in the use of emission control devices to determine availability of these devices.

- Town of Guadalupe supports this measure.

- City of Mesa will monitor technological changes in this area to determine appropriate availability of high quality devices. Mesa Dial-A-Ride transit vehicles currently run on diesel fuel. The City will contractually require installation of diesel emissions control devices on Mesa Dial-A-Ride vehicles when the devices become economically and technologically feasible.

- City of Peoria Public Works Director will monitor technological changes in the use of emission control devices to determine availability of these devices.

- City of Phoenix Public Transit Department and its principal contractor, Phoenix Transit, will continue to monitor the state of development of emission control devices and will experiment with them when appropriate.

- City of Scottsdale Fleet Management Program agrees to investigate the use of diesel emission control devices when these devices become economically and technologically feasible.

- Town of Surprise will implement this measure when these devices become economically and technologically feasible.

- City of Tempe, as a member of the Regional Public Transportation Authority, agrees to support the efforts of the RPTA and the City of Phoenix Public Transit Department in working with their contractors to monitor developments in the use of emissions control devices on public diesel powered vehicles and in experimenting with such devices, when and if they become economically and technologically feasible.

- City of Tolleson will install emission control devices as expeditiously as practicable on public diesel powered vehicles when these devices become economically and technologically feasible.

- Maricopa County Equipment Services Department has acquired emission testing equipment and is testing the County's fleet of 330 diesel powered vehicles in accordance with State law. This figure represents 35 percent of the County's On-Road Fleet of 950 vehicles. By 1990 this figure will be 428 diesel vehicles or 45 percent of the On-Road Fleet. All of the vehicles must pass an emission test with no exemptions allowed. Those that do not pass are taken out of service. The cost of the emission testing is $14 per fleet vehicle including all wages and benefits for 1/3 hour. The yearly cost for this program applied to 950 On-Road Fleet Vehicles is $13,300. 950 @ $14 = $13,300. The County fleet is a new fleet comprised of 808 vehicles or 85 percent of all On-Road vehicles of 1982 or later model years. These are the cleanest burning vehicles for carbon monoxide emissions. By 1990 the entire 950 On-Road Fleet will be 1982 model year or newer. The County will also evaluate the effectiveness of emission control devices when they become available for diesel powered vehicles. All fleet vehicles passed emission testing or were taken out of service - June, 1987. All fleet vehicles will be of 1982 model year or newer - June, 1990.

- Regional Public Transportation Authority will work with its contractor, Valley Coach, and the City of Phoenix Public Transit Department and its principal contractor, Phoenix Transit System, to continue to monitor the state of development of emission control devices. Experimentation with these devices will be undertaken when appropriate.

48. Alternative Work Hours (Areawide Strategy)

- City of Avondale Transportation Coordinator will study the implementation of flex time and encourage private employers to institute alternative work hours/days. Initiate flexible time study/research: October, 1988; Meet with other entities that have established similar programs: November, 1988; Draft recommendations: March, 1989; Presentation to Council: May, 1989; and Approval by Council/initiate program: June, 1989.

- Town of Buckeye will study the feasibility of alternate office hours and work weeks for municipal employees. Town Manager's Office will survey other public and private employers during a six month period to determine the most feasible approach.

- City of Chandler agrees to support the use of alternative work hours for its employees and comply with the state requirement of having at least 85 percent of employees on adjusted work hours beginning January 1, 1989. Many City employees currently work during off-peak hours to provide critical, twenty-four hour services such as police and fire protection. Office personnel in some departments are allowed to stagger their work hours to take advantage of off-peak travel time. Most of the field workers also begin work during off-peak hours.

- City of El Mirage has implemented this program in various departments within the City. A study will be made to determine the most feasible approach for public and private employers.

- Town of Gilbert agrees to continue its program of supporting the use of alternative work hours for its employees. Gilbert will work with other employers to encourage this measure. Adjustments to employee work hours (85 percent of employees) will be made pursuant to the state mandate by the Arizona Legislature beginning January 1, 1989.

- City of Glendale has already instituted a flexible time program for employees. Ongoing. Compliance with the Arizona 1987 air quality legislation - December 31, 1988.

- City of Goodyear Transportation Coordinator will study the implementation of a flexible time program and will encourage, through the air quality media program, private employers to institute alternative work hours/days. Ongoing.

- Town of Guadalupe will survey other public and private employers to determine the most feasible approach for public and private employers in Guadalupe. Guadalupe will implement this program for the Town staff if feasible.

- City of Mesa implemented an altered work hour program January 4, 1988. Most City departments now open at 7:30 a.m. Eighty-two percent of City employees are working hours other than 8:00 a.m. to 5:00 p.m. The goal is 85 percent. The City of Mesa also supports the promotion of such policies to private employers through the MAG Regional Ridesharing Program.

- Town of Paradise Valley will implement this measure.

- City of Peoria will study the implementation of a flexible time program and encourage private employers to institute alternative work hours/days. Ongoing.

- City of Phoenix Departments will continue to offer alternative work schedules to employees, based on their individual policies, if coverage during core hours is maintained and service to the public is not negatively affected. An evaluation of current alternative work hour practices will be completed in July, 1987 to find ways to expand the use of alternative work hours. The Rideshare Coordinator is working closely with Management and Budget staff in determining which Departments can perhaps make use of alternative work hours.

- City of Scottsdale Human Resources will assist General Managers in developing creative alternate schedules, so that by the legislatively mandated deadline, 85 percent of City employees work an alternate schedule during the months of October to March and still provide the same or better level of service to the public. Efforts began in June, 1987 and will be fully implemented in January, 1989.

- Town of Surprise will publicize and encourage employer cooperation regarding alternative work schedules and work weeks in Town publications and newsletters.

- City of Tempe agrees to continue its ongoing program of supporting the use of alternative work hours for its employees. It further agrees, as required by state statute, to adjust the working hours of at least 85 percent of its employees during the October through March period and to implement the adjusted schedule no later than January 1, 1989 and earlier if practicable. The City will also encourage major employers within the City to consider an alternative work hours program.

  Currently, many City employees work during off-peak hours to provide critical, 24-hour services such as police and fire protection and automated data processing support. Other employees such as custodians and library staff work on alternative schedules - for example, 4:00 a.m. to noon and noon to 8:00 p.m. Most field workers also begin work during off-peak hours. Additionally, office personnel in most departments are allowed to stagger their work hours to take advantage of off-peak travel time.

  To ensure compliance with the 85 percent statutory requirement, the City will initiate, during the first half of fiscal year 1987-88, a study to identify precisely current alternative work hour schedules and to develop a citywide alternative work hours plan which in addition to meeting the 85 percent criterion, will also attempt to correlate work hours with ridesharing and transit schedules and air quality considerations. The plan will be submitted to the Council Personnel Committee and then to the full City Council for consideration during the final quarter of fiscal year 1987-88, with implementation targeted for October 1, 1988. If, for any reason, implementation cannot be accomplished by the October date, the plan will be implemented, as mandated by State law, no later than January 1, 1989.

  Letters will be mailed to major employers during the first half of fiscal year 1987-88, encouraging them to explore the possibility of implementing an alternative work hours schedule.

- City of Tolleson supports this measure.

- Maricopa County Personnel Department has already implemented policies which permit departments to utilize alternative work hour programs. Approximately 7,400 Maricopa County employees have been identified as to variations in work week or work hours. Approximately 2,700 remaining employees need to be surveyed to determine the extent of work variances in fifteen departmental settings where employee work sites are not contiguous to the Downtown County Complex. Initiate program - June, 1987. Evaluation of program - June, 1988.

- Arizona Department of Transportation, as mandated by S.B. 1360 (Omnibus air quality - Chapter 365), will follow rules developed by the Director of the Arizona Department of Administration to establish adjusted work hours for at least 85 percent of employees in the nonattainment area for the period October 1 to April. In addition, ADOT will continue to provide options, year-round, to employees of alternative work hours or four-day work weeks where service to the public will not be affected. Effective date of S.B. 1360 - August, 1987.

- Arizona Legislature passed S.B. 1360 in 1987 which requires adjusted work hours for 85 percent of county, city and state employees in a nonattainment area. Major employers will submit their adjusted hour schedules to the Air Quality Compliance Committee which will develop an adjusted work hour plan for private employers. Businesses with 100 or more employees are encouraged to implement their own adjusted work schedules. The bill also establishes a committee on air quality compliance to monitor the compliance of state, city and counties on air pollution control, and to develop an adjusted work hour plan for private employers. The committee is established for five years and must submit a report by November 1 each year. S.B. 1360 effective date - August, 1987.

- Regional Public Transportation Authority and the MAG Regional Rideshare staff at RPTA will assist private employers and local jurisdictions in establishing flexible work hour schedules. A video tape is being produced on the subject, and the rideshare marketing representatives will work with individual companies to tailor a program that will meet their needs. Efforts began in June, 1987 and will be ongoing.

49. Alternative Work Weeks (Areawide Strategy)

- City of Avondale Transportation Coordinator will study the implementation of flex time and encourage employers to institute alternative work hours/days. Initiate flexible time study/research: October, 1988; Meet with other entities that have established similar programs: November, 1988; Draft recommendations: March, 1989; Presentation to Council: May, 1989; and Approval by Council/initiate program: June, 1989.

- Town of Buckeye will study the feasibility of alternate office hours and work weeks for municipal employees. Town Manager's Office will survey other public and private employers during a six month period to determine the most feasible approach.

- City of Chandler agrees to consider this measure as part of the Model Trip Reduction Ordinance and Coordinated Parking Management Program. If so encouraged by the MAG Regional Council, the City of Chandler will review and adopt a tailored form of the Model Ordinance.

- City of El Mirage has implemented this program in various departments within the City. A study will be made to determine the most feasible approach for public and private employers in the City.

- Town of Gilbert agrees to consider provisions encouraging alternative work days as part of the Model Trip Reduction Ordinance and Coordinated Parking Management Program.

- City of Glendale has already instituted a flexible time program for its employees. Compliance with the Arizona 1987 air quality legislation - December 31, 1988.

- City of Goodyear Transportation Coordinator will study the implementation of a flexible time program and will encourage, through the air quality media program, private employers to initiate alternative work hours/days. Ongoing.

- Town of Guadalupe will survey other public and private employers to determine the most feasible approach for public and private employers in Guadalupe. Guadalupe will implement this program for the Town staff if feasible.

- City of Mesa will continue to conduct feasibility studies to evaluate expanding the alternative work week program to other work areas. Several areas of the City currently operate on a four day work week (i.e. Police Patrol). As a result of a recent study, the Building Inspections Division field inspectors have begun working four day work weeks. The City will expand altered work weeks to other departments as warranted.

- Town of Paradise Valley will implement this measure.

- City of Peoria will study the implementation of a flexible time program and encourage private employers to institute alternative work hours/days. Ongoing.

- City of Phoenix Departments will continue to offer alternative work weeks to employees, based on their individual policies, if coverage during core hours is maintained and service to the public is not negatively affected. An evaluation of how current alternative work usage can be increased is underway, and will be completed by July, 1987.

- City of Scottsdale Human Resources will assist General Managers in developing creative alternate work schedules so that by the legislatively mandated deadline, 85 percent of City employees work on alternate schedules during the months October through March and still provide the same or better level of service to the public. Efforts began in June, 1987 and will be fully implemented in January, 1989.

- Town of Surprise will publicize and encourage employer cooperation regarding alternative work schedules and work weeks in Town publications and newsletters.

- City of Tempe agrees to continue to study the feasibility of increasing the number of work units and individuals who are on a ten-hour day, four day work week. The City will also encourage major employers within Tempe to consider utilizing alternative workweek schedules where feasible.

  The City has a limited alternative work week program already in place. Three divisions within the Public Works Department - Field Services, Water and Wastewater and Traffic Engineering - have crews that work four day weeks. Certain employees in the Community Services Department also adhere to an alternative work week schedule, working on the weekends.

  While its review of these programs is ongoing, the City will, as part of its alternative work hours study, evaluate the feasibility of expanding alternative work week schedules to other work units or individuals. The time frame for the study, Council consideration and implementation is the same as that delineated under the "Alternative Work Hours' implementation program.

  Letters will be sent to major employers within the City during the first half of fiscal year 1987-88 encouraging them to consider implementing alternative work week schedules where appropriate and feasible.

- City of Tolleson supports this measure.

- Maricopa County Personnel Policies now permit use of alternative work weeks for departments although public services must be provided in all areas at least five days a week with the exception of those seven day a week 24-hour departments. Alternative work weeks are now in place in approximately one-half of the County departments. Approximately fifteen remaining County departments need to be surveyed to determine the extent of work week variations involving approximately 2,700 employees. These fifteen departments are primarily found in work site locations not contiguous to the Downtown County Complex. Initiate program - June, 1987. Evaluation of program - June, 1988.

- Regional Public Transportation Authority and the MAG Regional Rideshare staff at RPTA will assist private employers and local jurisdictions in establishing programs to promote alternative work weeks. A video tape is being produced on the subject, and the rideshare marketing representatives will work with each company to develop a tailored program. Efforts began in June, 1987 and will be ongoing.

50. <u>Telecommunications - Telecommuting (Areawide Strategy)</u>

- Town of Buckeye supports this measure.

- City of Chandler agrees to coordinate with the Chandler Chamber of Commerce to encourage telecommuting by private employers beginning October 1, 1988. Information on telecommunications and other air pollution control measures will be disseminated via the Chandler Chamber of Commerce monthly newsletter and the Chamber's Government Affairs Committee.

- City of El Mirage supports this measure.

- Town of Gilbert Manager's Office will encourage telecommunications as an alternative to commuting or requiring travel. Town Information System Division is responsible for implementing the town electronic mail and messaging programs. The Town Personnel Office will review current operating environments to determine feasibility of "work at home" job opportunities. The Town will also work with the Gilbert Chamber of Commerce to educate and encourage use of technology in the private sector.

- City of Glendale will monitor the applicability of this technology. Ongoing.

- City of Goodyear Transportation Coordinator will monitor new research discussing the applicability of this measure over time. The Coordinator will also study possible implementation of this measure with a new computer and telecommunications system. Computer system on line - July, 1987. Telecommunications study - August, 1988. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa will explore the use of telecommuting by those employees that have home computers. The City will also work with the Chamber of Commerce to encourage greater use of telecommuting in the private sector.

- Town of Paradise Valley will implement this measure.

- City of Peoria will monitor new research discussing the applicability of this measure over time and study the feasibility of implementing a new computer and telecommunications system. Computer system on line - June, 1987. Research - Ongoing.

- City of Phoenix supports this measure.

- City of Scottsdale currently places computers in City officials' homes in order to encourage work at home. The goal of the program thus far has been to facilitate communication between top staff, City Councilmembers and selected positions with an identified need. The program currently includes about six percent of the total number of terminals and may be expanded further if appropriate to include more City staff at home during actual work hours.

- City of Tempe agrees to explore the possibility of providing telecommunications link-ups for selected employees. The Mayor and City Manager currently have terminals installed in their homes and tied into the City automated data processing system. Terminals for home use have also been programmed for the remaining six councilmembers. In addition, selected programmers and systems analysts in the Information Systems Division of the City's Management Services Department have at-home access to the data processing system and are encouraged to carry-out certain job activities via telecommuting. As a part of its annual review of employee positions and data processing

requirements, the City will attempt to identify those employees who could perform all or part of their job responsibilities via a telecommunications link and to ascertain whether it is feasible, within the overall data processing program, to provide the necessary equipment. This analysis will coincide with the annual budget process, January through May. It is not possible to commit to implementation of an expanded telecommuting program, however, until the analysis is completed and the feasibility of such a program determined.

- Town of Wickenburg commits to using its telecopying machines and modems in its computers for use in transmitting data. The Town does not commit to passing any legislation requiring other individuals within the Town to use similar devices.

51. Telecommunications - Teleconferencing (Areawide Strategy)

- Town of Buckeye supports this measure.

- City of Chandler will televise City Council and Planning and Zoning Commission meetings, expand its use of video taped training tapes for municipal employees, expand its use of electronic mail applications on municipal data processing equipment on an ongoing basis.

- City of El Mirage supports this measure.

- Town of Gilbert will explore the televising of Town Council, Planning and Zoning and other meetings of community interest, expand its use of video taped training, expand its use of electronic mail applications, consolidate offices and services, and develop alternate transportation networks (bike and pedestrian) within public facilities to minimize commuting trips by the public to multiple sites. The planning and construction of a comprehensive municipal complex is approximately three years away.

- City of Glendale Police and Fire Departments use teleconferencing for training program presentations and briefing sessions. Glendale residents are also able to view City Council meetings on cable television. Ongoing.

- City of Goodyear Transportation Coordinator will monitor new research discussing the applicability of this measure over time. The Coordinator will also study possible implementation of this measure with a new computer and telecommunications system. Computer system on line - July, 1987. Telecommunications study - August, 1988. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa currently broadcasts its City Council meetings on cable television. The City also uses teleconferencing on a limited basis for employee training.

- Town of Paradise Valley will implement this measure.

- City of Peoria will monitor new research discussing the applicability of this measure over time and study possible implementation of a new computer and telecommunications system. Computer system on line - June, 1987. Research - Ongoing.

- City of Phoenix Clerk Department, etc. responsibility under the telecommunications category is fulfilled by the telecommunication capabilities of OASIS, the Office Automation Support Information System. The OASIS telecommunications network went on-line in July, 1985 linking together six computers supporting 78 terminals in nine geographic locations throughout the City. The electronic mail and message features of OASIS allow municipal employees to share information such as reports, calendars, messages and memos without having to travel to centralized meeting locations.

  Since initial implementation, OASIS has been expanded with over 125 terminals having access to OASIS. The main computer has been upgraded to accommodate 32 additional terminals and system capacity was expanded by 33 percent. Over 800 hours of training on OASIS was provided during the 1986-87 fiscal year to conduct over 200 classes on the uses of OASIS for all levels of City employees.

  OASIS currently provides telecommunications service, not only to employees in the Municipal Building at 251 West Washington Street, but also provides service to employees at all the following locations:

  Barrister Place, 202 South Central
  Sky Harbor International Airport, 3400 Sky Harbor Blvd.
  Real Estate Division, 324 West Adams
  Economic Development Offices, One North 1st Street
  Engineering Office, 920 East Madison
  Police Department, 620 West Washington
  Civic Plaza, 335 East Adams
  Municipal Annex, 302 West Washington
  Fire Administration, 520 West Van Buren
  Phoenix Union Municipal Building, 455 North 5th Street
  Plaza Municipal Building, 235 East Washington
  Traffic Court, 12 North 4th Avenue
  UDH Building, 830 East Jefferson

  Three-way teleconferencing capability currently exists as a function of the City's telephone system. A six-way teleconferencing trunk has been ordered, at a cost of $108 per month, to be installed on or about July 1, 1987. Additionally, AT&T's ALLIANCE teleconferencing service is available for up to 58 simultaneous users. Costs are approximately $0.44 per minute for the service plus $0.25 per station per minute and long distance charges for each station to the equipment location (Los Angeles).

- City of Scottsdale agrees to encourage teleconferencing as a substitute for traveling to the meeting place. Specifically, Scottsdale's Office of Management Systems will promote the use of available teleconferencing capabilities and will train City staff in the use of those features. The existing City phone network will support

teleconferencing between six parties within the City and two parties from outside the City phone network. In addition, the City's voice mail system offers features that may eliminate the need for certain meetings. Training in the use of these teleconferencing and other phone system features will be primarily aimed at City staff in satellite facilities and the central City complex who meet on a regular basis. Certain voice mail features which eliminate the need for field personnel to travel to and from the office for check-in and assignments will be promoted with the City staff in field positions. Efforts will begin in August, 1987 and will be ongoing.

- City of Tempe agrees to examine, in conjunction with its annual budgetary process, the possibility of enhancing its existing teleconferencing capacity. The City currently uses telephone speaker attachments and its telephone conference calling capacity to conduct multi-part discussions which would otherwise require meetings. It also provides information and programming to the viewing public via its cable access channel and over the past two years has invested substantially in the development of an in-house video capacity. Further, the City has in place an office automation system which permits electronic exchange of information among and between its elected officials and managerial and administrative staff, thus reducing the need to travel to and from different city office sites for meetings. Access to the system is expanded as budget and data processing capacity allow. The possibility of electronically linking selected systems in state or other local government agencies has been discussed and is a subject for future exploration. However, there are significant costs, compatibility and security issues which must be resolved. No commitment for implementation can be made at this time, given present costs and benefits. Sophisticated modes of teleconferencing will likely be examined in conjunction with future evaluations and upgradings of the City's telecommunications and data processing systems.

- Town of Wickenburg presently encourages teleconferencing as a substitute for traveling.

52. Evaluation of the Air Quality Impacts of New Development and Mitigation of Adverse Imports (Areawide Strategy)

- City of Avondale Planning Department will, through its planning review process, identify any adverse impacts of new development on air quality. Necessary adjustments will be outlined as part of the approval process.

- Town of Buckeye will purchase the URBEMIS program from the California Air Resources Board and utilize it for air quality impact studies. Subdivision ordinance amendment will require six months.

- City of Chandler agrees to evaluate the impacts of new development on air quality and reduce any negative impacts on an ongoing basis. Chandler presently requires the preparation of traffic analyses on all applications which have a potentially significant impact on traffic.

- City of El Mirage will purchase the URBEMIS program and utilize it for air quality impact studies. The URBEMIS program has been developed by the California Air Resources Board to evaluate the impacts of various land uses on air quality. Development of the required subdivision ordinance amendment will require approximately six months. A development impact fee will be utilized to purchase the URBEMIS program. The Planning and Zoning Director will set up and operate the program.

- Town of Gilbert agrees to include the impacts of new development on air quality as part of the plan review process. Gilbert presently requires the preparation of traffic and parking analyses to accompany all applications for new development. These development standards and guidelines will be enhanced to include reviews of adequacy in assessing impacts of development and mitigating them. Ongoing efforts.

- City of Glendale will implement as part of the current development review process, an evaluation of projects for potential air quality impacts. If significant impacts are identified, a formal impact study will be done. Glendale will incorporate air quality for all general categories of land use in the General Plan. Evaluation incorporated into review process - August, 1987. General Plan Draft completed - Summer, 1987.

- City of Goodyear Planning Department will implement as part of the Planning and Development Review Process a program designed to evaluate new development projects, identify potentially adverse air quality problems and reduce negative impacts. Efforts will begin in November, 1987 and the program will be implemented. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa as part of its plan review process agrees to evaluate the impacts of new development on air quality. This review will include an evaluation of additional traffic (trips per day) generated by new development. Mesa currently conducts a Development Impact Summary for proposed developments that assesses the impact on various City services. The Development Impact Summary includes a category called air quality impact. Ongoing efforts.

- Town of Paradise Valley will implement this measure.

- City of Peoria's Comprehensive Master Plan states that it is the policy of the city to reduce only negative impacts caused by new development. Areas of high density, industrial, and commercial are reviewed for long-range air quality impacts. This is part of the general review process. Ongoing.

- City of Phoenix requires the preparation of traffic and parking analyses to accompany all Formal Rezoning Applications. These data have been used to require, as stipulations in rezoning and parking waiver decisions, developer commitments to traffic flow improvements and trip reduction programs. This process will be enhanced over the next calendar year to utilize more air quality-specific data.

Consistent with provisions of Senate Bill 1360 requiring consideration of the air quality in the land use element of the General Plan, the City will review the General Plan and if necessary, develop any needed amendments to this effect in the next amendment cycle.

- City of Scottsdale already requires traffic impacts studies as part of an application for a major rezoning. Traffic impact studies could be expanded to include an evaluation of the air quality impacts of major new, proposed development. This work would need to be coordinated with the Maricopa County Health Department because the County maintains the region's air quality monitoring system. Because of the regional nature of this issue, Scottsdale will work with MAG and the County Health Department to develop a mitigation policy. Efforts began in June, 1987. City signs contract with Maricopa County to implement the program if such action is deemed appropriate by the City - Summer, 1988.

- Town of Surprise will be implementing this measure as soon as possible. No environmentally hazardous industry will be allowed to relocate or build with Town limits.

- City of Tempe agrees to evaluate the air quality impact of new development by examining traffic circulation on-site as well as in areas affected off-site, and to suggest changes in site plans which will facilitate the flow of traffic. Further, the City of Tempe agrees to encourage employers in new developments to conduct annual transportation surveys that will monitor any changes in commuting behavior and provide data on which to base commuting program options, such as ridesharing, bus/trolley subsidies, transit stops and bicycle facilities. The evaluation of traffic circulation on and off-site is currently practiced, and the City of Tempe will continue its efforts to achieve the optimal flow for each project in order to reduce negative air quality impacts. The City of Tempe agrees to encourage employers to conduct transportation surveys once the City has an in-house program in place. It is estimated that the first quarter of 1988 would be appropriate for implementation.

- City of Tolleson supports this measure.

- Town of Wickenburg commits, insofar as its resources and technology are available, to evaluating the impact of new development upon air quality.

- Town of Youngtown will include in its Planned Area Development Ordinance for the limitation of air pollutants by eliminating areas of traffic congestion from plans.

- Maricopa County Department of Planning and Development will review applications for land development and continue to refer these applications to the Bureau of Air Pollution Control the County Public Health Division for analysis of impacts and possible mitigation measures for air quality. Process initiated - 1976. Issue memorandum specifying policy as described above - July, 1987.

- Arizona Department of Transportation, as mandated by S.B. 1360 (Omnibus air quality - Chapter 365), will prepare and submit to the Department of Environmental Quality an air quality impact report on any State-funded, transportation-related project which ADOT determines may have carbon monoxide or ozone impacts. This new provision does not apply to existing facilities nor to Federal Interstate highways. Previously, comparable reports have been prepared in the form of environmental impact assessments of Federally-funded projects. Effective date of S.B. 1360 - August, 1987.

53. Land Use Patterns Which Support Public and Rapid Transit

- City of Avondale will encourage, through its planning review process, land use patterns which support public and rapid transit.

- Town of Buckeye supports this measure.

- City of Chandler agrees to encourage the clustering of high intensity uses at major intersection nodes. Chandler will address land use patterns and their relationship to public transportation when it updates its General Plan in fiscal year 1988-89.

- City of El Mirage supports this measure.

- Town of Gilbert General Plan includes several land use techniques to incorporate public and rapid transit technology into the development of the community. This includes designation of core areas of commercial or a hierarchy basis which should diminish daily trips to the core of Gilbert, incorporation of several intense areas of development throughout the community to dispose employment throughout the area as well as the inclusion of multi-family development within high intensity use areas. The designated civic core will be designed and developed to access all transportation technology. The Town General Plan and development guidelines will be reviewed to address land use patterns and their relationship to public transportation.

- City of Glendale is currently revising its General Plan which will address activity centers, densities, and their relationship to public transportation. General Plan Draft completed - Summer, 1987.

- City of Goodyear Planning Department will work with developers during the Specific Area Plan Program Process and the Development Review Process to encourage land use patterns which support public and rapid transit and increase land use density along transit routes. Initiate program - April, 1987. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa is currently revising its General Plan, which will address major activity center area densities and their relationship to public transportation. The General Plan will include a separate section on transportation and a discussion on various land use policies designed to promote public and rapid transit. One corridor that has been identified as an area to be developed in a way to promote public and rapid transit is the Power Road corridor. The General Plan is scheduled to be completed by Spring 1988.

- City of Phoenix will pursue implementation of this measure as reflected in the General Plan. This is a continuous activity which is already reflected in the 1987-88 Operating Budget.

- City of Scottsdale Advance Planning, Master Planning, and Traffic Engineering land use programs will continue to plan for land uses which support public and rapid transit. One of the guiding planning principles for the City is that of relatively urban mixed-use activity centers flanked by lower density residential uses. This approach creates a string of activity centers linked by major arterial roads which connect the centers. Of special importance is Downtown, which is the most intense mixed-use center in the City. Not only does the Downtown provide a transportation focus for the City, it also contains many of the jobs and more intense residential areas. In addition, Downtown will serve as home to the proposed transit center. The City of Scottsdale will continue to work with other valley cities, MAG, and the Regional Transit Authority to create land use patterns which support public and rapid transit. Efforts began in June, 1987 and will be ongoing.

- City of Tempe is bordered on all sides by incorporated municipalities, and less than twenty percent of the land within its boundaries is available for new development. Increasing land use densities along corridors and major clusters are already the rule and not the exception. Single family development within the City is virtually completed, and new residential development is already planned and zoned as multi-family. In addition, the update of Tempe's General Plan targets growth nodes and corridors for dense mixed-use development which provide all the amenities needed to work, live, shop and recreate within walking distance. Furthermore, Tempe's future planning effort includes long-range plans to expand the connection of vital segments of the City through greenbelt linkages incorporating bikepaths. The Planning and Zoning Commission public hearing on the General Plan Update is scheduled for September of 1987, followed by the City Council public hearing in late October, 1987. Final City Council adoption of the revised General Plan is targeted for during FY1988-89. Ongoing efforts.

- City of Tolleson supports this measure.

- Maricopa County Department of Planning and Development in cooperation with MAG agencies will guide the preparation of private development master plans and the countywide comprehensive plans to accommodate a public transportation network. Board of Supervisors to adopt plans - January, 1988. Private development master plans reviewed by staff - June, 1988.

- Regional Public Transportation Authority will continue working with state and local planning departments, public officials, citizens, and developers to encourage the development of land use patterns and plans which support public and rapid transit. Ongoing.

54. Reduced Idling at Drive-Up Facilities

- City of Avondale will review the recommendations made in the MAG Model Trip Reduction Study and determine feasibility for implementation beginning in January, 1989.

- Town of Buckeye will purchase appropriate signs and provide them to businesses which will be required to install them by ordinance. Ordinance development and signage procurement will require six months.

- Town of Carefree agrees to discourage extensive idling by vehicles not equipped with catalytic converters by requesting drive-up facilities to place signage which discourages idling. Carefree will remind its citizens via the Town's Newsletter, of the contribution that they can make towards improving Carefree's air quality, by encouraging them not to idle their vehicles for extensive periods of time. In addition, Carefree will suggest to developers that they place signage at the entrance to drive-up facilities to discourage extended periods of idling.

- City of Chandler agrees to discourage extensive idling by vehicles not equipped with catalytic converters as part of its air pollution public awareness activities. Information on measures to reduce air pollution will be disseminated via City and Chamber communication outlets no later than October 1, 1988.

- City of El Mirage will require the purchase of appropriate signs by businesses to discourage idling at drive-up facilities. Development of the required ordinance will require approximately six months.

- Town of Gilbert agrees to discourage extensive idling by vehicles not equipped with catalytic converters as part of its air pollution public awareness activities. Gilbert will use public service announcements on the cable channel, work with the Chamber of Commerce, and review design of drive-up requests to determine their propriety in future developments. Efforts will begin on October 1, 1987.

- City of Glendale will initially address this measure be seeking voluntary compliance. The City will work with businesses to develop a plan to reduce idling time at these facilities. The location and number of drive-up facilities will be addressed in the General Plan. Public Awareness Program implemented - January, 1988. General Plan Draft completed - Summer, 1987.

- City of Goodyear will review the Model Trip Reduction Study recommendations and identify those incentives feasible to implement. Results of the study will be shared with private employers. Model Trip Reduction Study - December, 1988. Analyze results of study and consider for implementation - June, 1989.

- Town of Guadalupe will develop legislation to discourage extensive idling of vehicles. This will be done with signage and the costs can be assumed by the Town and/or businesses.

- City of Mesa will initially address this measure by seeking voluntary compliance. The City will develop appropriate suggested signage to discourage idling by vehicles without catalytic converters. The drive-up facility could be responsible for posting the signage. Develop a public awareness program and implementation by July, 1988.

- Town of Paradise Valley will implement this measure.

- City of Peoria will review the recommendations from the Model Trip Reduction Study and identify those incentives feasible for implementation. Results of the study will be shared with private employers. January, 1987 - January, 1989.

- City of Phoenix Council has directed City staff to develop an enforceable program to reduce emissions associated with drive-up facilities at the Council meeting on June 30, 1987. Phoenix will keep MAG apprised of progress made on program development.

- City of Scottsdale will encourage businesses with drive-up facilities to post signs discouraging those automobiles not equipped with catalytic converters (usually cars of model year 1980 or older) from idling while waiting in drive-up line. After approval of Scottsdale Air Quality Plan by City Council, letters will be sent by Traffic Engineering Department to all businesses utilizing drive-up facilities in Scottsdale, explaining the desire to reduce idling at such facilities by automobiles without catalytic converters and asking and encouraging these businesses to post signage discouraging such automobiles from doing so. Installation of the sign shall be the responsibility of the business.

- City of Tempe agrees to encourage drive-up facilities voluntarily to post signage warning of the negative air quality impacts created by extensive idling. Further, the City of Tempe agrees to place educational articles in the TEMPE TODAY newsletter to increase awareness of the problem. The City of Tempe will begin to encourage the voluntary posting of signage during the late Summer and Fall of 1987. A newsletter article will be published in the Fall of 1987.

- City of Tolleson supports this measure.

- Town of Wickenburg will support this measure if required by state legislation.

55. Auto Free Zones and Pedestrian Malls Where Appropriate

- City of Avondale will address this measure during the Development Planning Process. Ongoing effort.

- City of Chandler will implement Auto Free Zones and Pedestrian Malls within the Downtown Area through initiation of municipal complex and development standards for private sector projects. Public facilities will be phased in over the next fifteen years to include Pedestrian Malls and incorporate pedestrian linkages within the municipal complex. Upon adoption of revised development standards, implementation of Pedestrian Malls and Auto Free Zones will be undertaken as individual private projects are reviewed and approved.

- Town of Gilbert reviews the designs for the Urban Civic Core, the Town Civic Complex, and high intensity development areas to determine the feasibility of integrating auto free zones and pedestrian malls into the overall transportation network. The current design for downtown Gilbert reconstruction is pedestrian-oriented to encourage "one-stop" commercial enterprises. The downtown reconstruction should be substantially completed by Spring, 1988. The future designs for the Civic Center, the new core area and high intensity development areas will come as development occurs in these areas. The civic center is approximately three to five years from construction, the urban core five to ten years and the high intensity areas throughout the next three to twenty-five years.

- City of Glendale is currently revising its General Plan which will address these issues. General Plan Draft completed - Summer, 1987.

- City of Goodyear will address this measure during the Specific Area Plan Program Process and the Development Review Process. Ongoing.

- Town of Guadalupe supports this measure.

- City of Mesa has been committed to the revitalization of its downtown for several years. Currently the City is developing Town Center Redevelopment Site #8. The master plan of this 10 acre site calls for the inner core of the development to be an auto free zone. A series of parking garages will be built in the outer area, thus essentially creating an auto free zone in the core area. Future downtown redevelopment sites will be planned in a similar manner.

  Current plans for this development show a five year timetable for total site development. Construction is scheduled to begin in late Spring 1988.

- City of Peoria will address this measure during the specific area plan program for downtown redevelopment. Ongoing.

- City of Phoenix will consider these and related treatments in the context of the Central Avenue Image Study, Downtown Circulation Plan, the Village Plans, and the Peripheral Area A, B, C, and D Plans. The RPTA and the Public Transit Department are also considering these measures in the RPTA Central Corridor Study. This is a continuous activity.

- City of Scottsdale has already taken a nationally recognized leadership position in providing high amenity pedestrian mall space. Any expansion of auto free malls and pedestrian only areas will be carefully integrated into the circulation plan in order to avoid off-site traffic congestion. The City has explored the use of incentives to encourage downtown plazas as part of the Downtown Plan. Free parking and shuttle service is provided to encourage pedestrian travel. With the completion of the couplet, downtown Scottsdale will not be required to accommodate major arterial traffic on streets used for downtown shopping. The couplet will provide for the separation of these types, thereby allowing auto free zones in the downtown. Additionally, the

Galleria, the Portales, and other large indoor malls will allow shoppers to leave their autos while shopping in an environment which provides amenities that will encourage pedestrian traffic. Construction of the couplet - 1987 to 2000. Ongoing.

- City of Tempe is committed to a pedestrian orientation in the downtown. This commitment is evident in the elimination of on-street parking downtown in conjunction with the widening of the sidewalks by an additional six feet. In addition, parking is located in off-street facilities to encourage people to walk to destinations and not utilize their vehicles. Furthermore, the General Plan Update, now in the final phases of consideration, stresses pedestrian areas and facilities, targeting growth nodes and dense mixed-use developments which permit persons to live, work and play all within walking distance. Construction of wider sidewalks and elimination of on-street parking on Mill Avenue began in June of 1987 and will be completed by September of 1987. Final adoption of the revised General Plan is targeted during FY1988-89.

- City of Tolleson supports this measure.

- Town of Wickenburg would welcome pedestrian malls and encourage their existence in this smog-free town.

56. Enforcement of Traffic, Parking, and Air Pollution Regulations (Areawide Strategy)

- City of Avondale Police Department will review and if appropriate revise policies dealing with traffic and parking and strictly enforce the policies. Ongoing efforts.

- Town of Buckeye will ticket visibly smoking vehicles, enforce parking and traffic regulations, and truck restrictions during peak periods immediately for applicable regulations.

- City of Chandler Police Department will continue to issue citations to drivers of vehicles in violation of related ordinances and laws (including enforcement of requirements for inspection identification stickers, parking regulations, etc.).

- City of El Mirage will implement this measure immediately for applicable regulations where appropriate. Enforcement appropriate for the City includes ticketing of visibly smoking vehicles, and enforcement of specially enacted anti-pollution measures such as truck restrictions during peak periods.

- Town of Gilbert will continue its ongoing, aggressive traffic and parking regulation and enforcement program. Citations will be issued to drivers in violation of ordinances and laws including enforcement of requirements for inspection identification stickers, parking regulations, etc.

- City of Glendale recently revised its Parking Enforcement and Citation Follow-up Policy. Glendale Police will issue citations instead of repair orders/warnings to motor vehicles emitting visible emissions. Ongoing. Visible emissions enforcement increased - September, 1987.

- City of Goodyear Police Department will review and if appropriate, revise policies dealing with traffic and parking and will strictly enforce these policies.

- Town of Guadalupe will enforce all State and Town laws applicable to this measure. Enforcement will be done by the Guadalupe Police Department.

- City of Mesa has entered into a contractual agreement with Mesa Town Center Corporation to enforce all parking regulations within the one square mile Town Center area. This arrangement should significantly improve the enforcement of existing parking laws within the Town Center. The Town Center has already devised a parking management system limiting employee parking to restricted lots. A charge is assessed to those employees parking in the restricted lots. The City will also continue aggressive enforcement of traffic regulations.

  The parking program became operational in May, 1987. Twenty-three patrol officers will be added to the Police Department during FY1987-88.

- Town of Paradise Valley will implement this measure.

- City of Peoria Police Department will review and if appropriate, revise policies dealing with traffic and parking. The policies will be strictly enforced. Efforts will begin in September, 1988. Implementation of revised program - January, 1988.

- City of Phoenix Police Department will continue to issue citations to drivers of vehicles in violation of related ordinances and laws.

- City of Scottsdale Police Department and City Court will emphasize this program to existing personnel at training sessions and by training bulletins to be issued by the Administrative Bureau by August 1, 1987. New officers will be instructed as to the importance of enforcing the excessive smoke statutes and other "clean air" statutes. This is an ongoing program as the officers are employed. The City Court will be contacted by the Special Operations Supervisor and the importance of these citations will be expressed. This will be accomplished by July 1, 1987. An advertising campaign will be requested by Communications and Public Affairs. This will be to educate the public in the prioritization of these citations. This should be in place by September 15, 1987.

- Town of Surprise will enforce existing air pollution and parking regulations.

- City of Tempe agrees to continue its ongoing, aggressive traffic and parking regulation enforcement program. Any new traffic, parking or air pollution regulations which may be adopted by the City Council or imposed by state law will also be strictly enforced. Tempe strictly enforces its traffic and parking regulations. Its parking enforcement program includes "booting" of vehicles of repeat offenders, and overtime parking fines were raised from $2 to $10 per violation three years ago. Ongoing efforts.

- City of Tolleson supports this measure.

- Town of Wickenburg is committed to enforce new state, county, or municipal laws and will continue to fulfill its commitment in this area.

- Maricopa County Division of Public Health Bureau of Air Pollution Control (Stationary Source Control) hired an additional Public Health Engineer to work in the Enforcement Section and two new Air Quality Planners to revise existing regulations and develop new regulations. Applicable new Source Performance Standards will be adopted following promulgation by the Environmental Protection Agency. Efforts began in January, 1987. Present proposed revisions and new regulations presented to Board of Supervisors for approval and adoption - October, 1987 to December, 1987. Ongoing review and development of regulations - January, 1988.

57. Expansion of the Areawide Monitoring Network (Areawide Strategy)

- City of Avondale will support the Maricopa County Health Department in its efforts to increase the areawide air quality monitoring network.

- Town of Buckeye supports this measure.

- City of Chandler agrees to support and cooperate with the Maricopa County Health Department in the expansion of the areawide air quality monitoring system. The Maricopa County Bureau of Air Pollution Control has stated that it plans to relocate its mobile monitoring laboratory approximately every three months.

- City of El Mirage supports this measure.

- City of Glendale will request that the air quality monitoring network be expanded. Ongoing.

- City of Goodyear will support the Maricopa County Health Department in its effort to increase the areawide air quality monitoring network.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to support and cooperate with the Maricopa County Health Department in expansion of the areawide air quality monitoring network. Maricopa County Bureau of Air Pollution Control has previously indicated it will study densely populated sub-regions of the urban area to determine air quality benefits of establishing additional monitoring stations. The Bureau's mobile monitoring laboratory will be utilized for those studies.

- City of Peoria will support Maricopa County Health Department in expanding the network.

- City of Phoenix supports this measure.

- City of Scottsdale Traffic Engineering Department shall, when requested to do so by the Maricopa County Health Department, make recommendations for Scottsdale locations for new air quality monitoring stations.

- City of Tempe agrees to support and cooperate with the Maricopa County Health Department in expansion of the areawide air quality monitoring network.

- Maricopa County Bureau of Air Pollution Control will study sub-regions of the Non-attainment Area to determine the air quality benefits of establishing additional monitoring stations. The Bureau's mobile monitoring laboratory will be available for those studies. May, 1987 to February, 1988.

58. Winter Daylight Savings Time

- City of Chandler agrees to urge the Arizona Legislature to make an appeal to the 1966 Uniform Time Act on behalf of the State of Arizona beginning in the 1988 session. If the Legislature declines, Chandler will urge Maricopa County to make the appeal.

- Town of Gilbert will request that the Legislature make an appeal to the 1966 Uniform Time Act beginning in the 1988 session. If the Legislature declines to initiate such a request, Gilbert will urge Maricopa County to make the appeal. Gilbert will make these requests if the study mandated by the Legislature (in the 1987 session) deems Winter Daylight Savings Time an appropriate action which will not endanger the community.

- City of Glendale supports an appeal by the Arizona Legislature to the U.S. Department of Transportation, Office of General Counsel. Efforts will begin in August, 1987 and continue through May, 1988.

- City of Goodyear supports the concept of Winter Daylight Savings Time and will encourage a legislative appeal to the Uniform Time Act on behalf of Arizona.

- Town of Guadalupe supports this measure.

- City of Mesa agrees to reaffirm its support of Winter Daylight Savings Time and lobby for its adoption next legislative session if the study by the Arizona Department of Environmental Quality indicates that it will have a positive impact on air pollution.

- City of Peoria supports this concept and will encourage a Legislative appeal to the Uniform Time Act.

- City of Phoenix supports this measure.

- City of Scottsdale will request the Arizona Legislature to make an appeal necessary for implementation of this measure in the 1988 Legislative session.

- City of Tempe agrees to encourage the Arizona State Legislature to take the action necessary to appeal to the 1966 Uniform Time Act and the U.S. Congress to make the shift to Winter Daylight Savings Time. Efforts will be during the 1988 Legislative Session.

59. Contingency Plan

- City of Avondale will continue to participate with the MAG Air Quality Policy Committee on this measure.
- Town of Buckeye will support this measure.
- City of Chandler agrees to review annual progress reports prepared by the MAG Air Quality Policy Committee regarding annual efforts to reduce particulate pollution beginning no later than one year after adoption.
- City of El Mirage supports this measure.
- Town of Gilbert agrees to review annual progress reports prepared by the MAG Air Quality Policy Committee regarding annual efforts to reduce pollution and participate as necessary.
- City of Glendale will develop a computerized monitoring program to track the progress made with the implementation of this measure. Ongoing.
- City of Goodyear will continue to participate with the MAG Air Quality Policy Committee.
- Town of Guadalupe supports this measure.
- City of Mesa has a City Councilmember that serves on the MAG Air Quality Policy Committee. Mesa will also review the need to strengthen existing measures and the use of additional measures.
- City of Peoria will continue to participate on the MAG Air Quality Policy Committee.
- City of Phoenix supports this measure.
- City of Scottsdale will support the efforts of the MAG Air Quality Policy Committee in this measure through active involvement on the committee by a city elected official and a Scottsdale citizen. Ongoing.
- City of Tempe, as a member of the Maricopa Association of Governments and with a representative on the MAG Air Quality Policy Committee, agrees to support and participate in the annual review of progress made to reduce carbon monoxide and ozone pollution and the consideration of additional measures, if necessary. It further agrees to monitor at the local level progress made toward meeting its individual commitments. The MAG Air Quality Policy Committee review will be conducted annually. Local reviews of progress made will be conducted quarterly. If additional measures are determined necessary as a result of the annual MAG review, implementation schedules will be developed at that time.
- Town of Youngtown supports this measure.

- Maricopa County, as a member of MAG agrees to support and participate in the annual review of progress made to reduce particulate pollution and the consideration of additional measures, if necessary. Maricopa County further agrees to monitor progress made by county departments toward meeting its commitment. MAG Air Quality Policy Committee review will be conducted annually. County reviews of progress will be conducted quarterly.

ADDITIONAL MEASURES

60. Land Use Patterns That Discourage Automobile Use

- Town of Cave Creek will provide for land use patterns that will discourage automobile use within the Town's commercial downtown area. Continue General Plan Process: April, 1988 and Evaluation of zoning requests and site plan approvals: Ongoing.

61. Reduced Parking Requirements for Firms with Ridesharing

- Town of Gilbert will review development guidelines to allow reduced parking lot coverage for developments employing high occupancy or transportation pooling techniques within their development proposals.

TRACKING PLAN IMPLEMENTATION

As discussed in Chapter Six, the Maricopa County Bureau of Air Pollution Control determines reasonable further progress and reviews the implementation status of the various measures contained in the air quality plans on an annual basis. In order to accurately monitor or track plan implementation, the Maricopa County Bureau of Air Pollution Control will be requesting that the implementing agencies and jurisdictions complete the annual progress report contained in Table 7-1. The Bureau of Air Pollution Control will then review and summarize this information, prepare an implementation status report, and then present the report to the MAG Air Quality Policy Committee. The Maricopa County Bureau of Air Pollution Control will also continue to have the responsibility for conducting ambient air quality monitoring.

Supplemental to the tracking efforts of the Maricopa County Bureau of Air Pollution Control, the Maricopa Association of Governments publishes regional traffic flow maps every two years and calculates regional vehicle miles of travel from these flow maps. MAG also conducts a vehicle occupancy study each year, publishes a monthly traffic count stations report each year, and performs special traffic volume and speed studies as needed. Phoenix Public Transit continuously monitors transit ridership and summarizes daily ridership for each month. The Regional Public Transportation Authority will also be collecting transit and carpooling ridership information. The Arizona Department of Environmental Quality continuously monitors the number of vehicles inspected in the Vehicle Inspection Maintenance Program, the number of vehicles failing the test, and the improvement in tail pipe emissions after failed vehicles are repaired.

As indicated in the Contingency Plan, the MAG Air Quality Policy Committee will review progress made to improve air quality on an annual basis. If necessary, the Committee will consider strengthening existing measures and adding other measures.

TABLE 7-1

MAG 1988 PARTICULATE PLAN FOR PM-10
ANNUAL PROGRESS REPORT FOR CALENDAR YEAR 1988

Control Measure _____

City/Agency _____

Contact Person _____ Title: _____ Phone No. _____

1) Describe **legal** commitment (include: adoption by city council/governing body, date of adoption, form of adoption, i.e. ordinance, resolution, budgetary commitment, etc).

2) Describe **funding** commitment (include total dollar amount allocated for this strategy, total dollar amount spent during this calendar year; identify funding source).

3) Describe the **progress** achieved on this control measure:

   A. Prior to 1988 (see attachment "A")

   B. During calendar year 1988 (see attachment "A").

SAMPLE

INSTRUCTIONS FOR DESCRIBING "PROGRESS" IN QUESTION #3

Information from the annual progress report will be summarized to measure the progress achieved on each control measure. To accomplish this, it is important the response in question #3 include uniform reporting units (e.g. miles or reversible lanes, number of spaces in park and ride lots). The specific reporting units for each strategy are listed below.

Part A of question #3 asks for a description of the progress achieved before January 1, 1987. For instance, the existing number of bus pullouts in curbs for passenger loading, or the existing miles of bike paths in place before 1988. Part B emphasizes progress achieved in calendar year 1988. The response in both A & B shall be quantified using the reporting units for that strategy.

LIST OF REPORTING UNITS FOR DESCRIBING PROGRESS ON MAG STRATEGIES

Control Measure	Reporting Unit
Computerization and synchronization of traffic signals	Number of intersections
Reversible lanes on arterials	Number of miles
Park and ride lots	Number of lots and Number of parking spaces
Preferential parking for carpools and vanpools	Number of parking spaces

etc.....

APPENDIX N, Exhibit 2:

MAG 1988 Particulate Plan for PM-10: Phase One for the Maricopa County Area, Chapter Eight: Demonstration of Attainment Status.

CHAPTER EIGHT

DEMONSTRATION OF ATTAINMENT STATUS

Based upon the air quality modeling analysis presented in Chapter Three, a 34.4 percent reduction in emissions is needed to attain the PM-10 standard by 1992. For 1994, a 36.6 percent reduction in emissions is needed to attain the standard. The control measures included in the MAG 1988 Particulate Plan for PM-10: Phase One have the potential to reduce PM-10 emissions by 26.2 percent in 1992 and 34.7 percent in 1994.

The figures cited above represent potential emissions reductions obtainable from the plan. In Chapter Eight, the plan is evaluated in terms of emission reductions that will result from actual commitments to implement control measures in the plan. These commitments were obtained from MAG member jurisdictions and other appropriate implementing agencies. Additional details concerning these commitments are provided in Chapter Ten.

Based on the evaluation of the commitments, it is estimated that the control measures will result in a 0.17 percent reduction in emissions by 1992 and a 0.38 percent reduction by 1994. On this basis, it is estimated that the Maricopa County area will not achieve the PM-10 standard by 1994.

It is important to note that a broad range of commitments were received, addressing implementation of measures in the plan. The extensive commitments from MAG member jurisdictions demonstrate the level of effort that is being made to improve air quality in the region.

In the determination of attainment status, specific emissions reduction credits were not taken for commitments where the basis for estimating air quality benefits was limited. However, in many cases these commitments will produce emissions reductions above and beyond what has been quantified in the evaluation of attainment status. These measures represent additional efforts by MAG member jurisdictions to reduce emissions and improve air quality. It is anticipated that as additional experience is gained in the implementation of these measures, a more detailed assessment of their air quality benefits can be developed and reported.

ESTIMATED IMPACTS OF CONTROL MEASURES BASED UPON PLAN COMMITMENTS

In order to take credit for the full potential of the plan to reduce PM-10 emissions, the level of commitments to implement the plan must be comparable to the versions of the measures modeled. Accordingly, the commitments for implementation received by MAG in April, 1988 were reviewed and compared with the modeled versions of the control measures.

Table 8-1 summarizes the percent reduction in emissions estimated for the control measure commitments as described above. Only those measures for which emission reduction credit was taken are listed. The values reflect the change in total emissions with the measure in place divided by total emissions for the base year (1992, 1994) without any new measures in place. It should be noted that the estimated emission reductions represent the incremental effect of the measure and

Table 8-1

PM-10 EMISSIONS REDUCTIONS ESTIMATED FOR CONTROL MEASURE COMMITMENTS

Measure	1992 Percent Reduction in PM-10 Emissions From Base	1994 Percent Reduction PM-10 Emissions From Base
Paving and/or Dust Proofing of Unpaved Roads, Alleys, and Parking Lots. (Credit incorporated into future base case projections.)	3.9	5.3
Use of Number One Diesel Fuel or Premium Diesel Fuel in Maricopa County.	0.01	0.01
Measures adopted for the carbon monoxide and ozone plans which also reduce particulates (PM-10): Short-Range Transit Improvements, Expanded MAG Regional Ridesharing Program, High Occupancy Vehicle Lanes on Freeways, Increased Bicycle Use and Pedestrian Travel.	0.16	0.37

NOTE: In addition to the measures listed above, numerous commitments were made involving other control measures which would yield additional benefits. However, in many cases the impacts of these commitments were not readily quantifiable, and no credit was taken for emissions reductions.

not the total effect of the program area. For example, the reduction estimated for Short-Range Transit Improvements refers only to the effects of new services and not the total contribution of the entire transit system.

For each measure in the adopted plan, a brief discussion of the impact estimation is presented below. Following the review of individual control measures, the combined impact of the committed measures is estimated and attainment status is discussed.

1. Vehicle Inspection Maintenance Program - 1987 Legislation for All Model Year Vehicle on a Statewide Basis (Areawide Strategy)

During the spring of 1987, the Arizona Legislature gave consideration to a variety of air pollution control measures including options for strengthening the State Vehicle Inspection Maintenance Program. MAG, Maricopa County, and the MAG cities and towns urged the Legislature to amend the program to require application on a statewide basis. In May, 1987 the Legislature passed a major air quality bill, Senate Bill 1360, which the governor signed into law. This legislation did not expand the geographic coverage of the State Vehicle Inspection Maintenance Program, but did strengthen it in several ways as highlighted below.

- The 1987 law applies inspection and maintenance requirements to "those vehicles registered outside of a nonattainment area but used to commute to the driver's principal place of employment located within a nonattainment area."

- The 1987 law applies inspection and maintenance requirements to the vehicles of students attending State universities and State-supported community colleges within nonattainment areas, even if these vehicles are not registered in Maricopa or Pima County.

- The 1987 law establishes a system whereby an air quality compliance sticker or comparable device will be used to identify vehicles which have complied with the requirements of the State Vehicle Inspection Maintenance Program. Vehicles which have been exempted from the program will also receive a sticker. Beginning in 1989, by which time each vehicle in compliance will have such a sticker, any vehicle without a sticker will be prohibited from parking on State campuses or in lots reserved for employees of the State or local governments. The Arizona Department of Administration is given the authority to institute further nonattainment area parking prohibitions affecting vehicles not in compliance.

- The 1987 law increases to two hundred dollars the cost of repairs which may be required for a vehicle manufactured in model years 1975 through 1979 to be issued a certificate of waiver under the State Vehicle Inspection Maintenance Program. The previous waiver limit for these vehicles was one hundred dollars.

The PM-10 emission reduction modeled for a statewide program including all model year vehicles was 0.10 percent for 1992 and 0.11 percent for 1994. Various bills have been proposed in the Arizona Legislature in the spring of

1988 to expand or strengthen the Vehicle Inspection Maintenance Program. Credit for any change in the program will be taken as new legislation is enacted.

2. Use of Number One Diesel Fuel or Premium Diesel Fuel in Maricopa County (Areawide Strategy)

The use of Number One Diesel Fuel or Premium Diesel Fuel with additives could be required throughout Maricopa County by an act of the Arizona Legislature. Widespread support for this measure has been indicated by MAG member jurisdictions. In the absence of a legislated requirement, several cities are evaluating the possibility of voluntarily using the cleaner, costlier fuels in municipal fleet vehicles. Additionally, the use of Number One Diesel Fuel in all Phoenix Transit buses was initiated during the fiscal year 1987-88. The number of buses in the Phoenix Transit fleet is approximately 350, while the total number of diesel powered vehicles registered in Maricopa County is approximately 30,865. The Phoenix Transit fleet therefore represents only about one percent of the diesel vehicles in Maricopa County.

The modeled scenario for this measure involved mandatory use of cleaner diesel fuels by all diesel powered vehicles. This would result in PM-10 emission reductions of 0.77 percent in 1992 and 0.86 percent in 1994. The proportional reduction attributable to the Phoenix Transit fleet at its present size would be approximately 0.01 percent for both 1992 and 1994. The size of the regional transit fleet could increase significantly if voters approve a February, 1989 referendum authorizing a one-half cent sales tax to fund a regional transit system.

3. Paving and/or Dust Proofing of Unpaved Roads, Alleys, and Parking Lots

Numerous MAG member jurisdictions have made commitments to pave and/or dust proof unpaved roads, alleys and parking lots. Maricopa County, with jurisdiction over 1473 miles of unpaved roads, has a goal of paving 25 miles per year. The City of Glendale anticipates paving 17.2 miles of roads during 1988-89. In Phoenix, paving and other improvements to existing substandard roads are accomplished through direct city projects and through municipal participation in improvement districts. The City of Mesa indicated that it will work with property owners to form special improvement districts to pave the remaining 20 miles of unpaved roadways. Mesa also will pave the remaining four unpaved city parking lots as funds become available. One parking lot is expected to be paved by the end of June, 1988. Chandler presently grades all unpaved roads weekly and grades more than 180 miles of unpaved alleys once per year. The City of Scottsdale blades and compacts 250 lane-miles of dirt roads on a quarterly basis. Scottsdale also applies a dust control agent to a minimum of 25 miles of alleys each year. In Tempe, all streets have been paved and all alleys are required to be maintained in a dust proofed condition. In several towns, all dirt roads have been or soon will be paved.

The air quality modeling results for this measure indicated that emission reductions of 8.14 percent and 13.54 percent could be achieved by 1992 and 1994, respectively. These reductions were based on a scenario in which 10 percent of all existing unpaved roads, alleys and parking lots would be paved

each year, beginning in 1989. This 10 percent effort would be in addition to the present level of effort. The present level of effort was estimated at approximately 2.8 percent, reflecting the historical decline of dirt road mileage under Maricopa County jurisdiction since 1981. This historical rate of paving was incorporated into the projection of future base case conditions for the years 1992 and 1994. The PM-10 emission reductions resulting from continuation of historical paving rates were calculated to be 3.9 percent for 1992 and 5.3 percent for 1994. To justify taking additional emission reduction credit for this measure in comparison to the projected base cases, future paving efforts in the region would need to exceed the historical rate. Based upon evaluation of the commitments, it does not appear that an increased level of effort is presently anticipated. Therefore no additional credit can be taken for this measure.

4. Paving and/or Dust Proofing Driveways, Curbing, and Frequent Sweeping

Periodic street sweeping is an ongoing public service provided by the MAG cities and towns, Maricopa County, and the Arizona Department of Transportation. Sweeping frequency varies by jurisdiction, facility type and area type. For example, the City of Phoenix sweeps major downtown streets three times weekly, other major streets weekly, and residential streets at least quarterly. In Scottsdale, arterial streets are swept once or twice weekly, based on location and need, while residential streets are swept an average of once every three weeks. In downtown Tempe, a highly pedestrian-oriented area, the streets are swept daily. Several towns indicated commitments to acquire street sweeping equipment and/or to increase sweeping frequency. The installation of curbing and the paving of driveways are commonly required or strongly encouraged as well. Curbing is often provided as part of street improvements related to land development. The City of Glendale plans to construct 34.4 miles of curbing during 1988-89.

According to Engineering-Science, maximum effectiveness of this strategy may require sweeping and washing several times per week. Also, it was noted that a newly cleaned street will revert to its previous condition "after several hundred vehicle passes". The maximum effectiveness of the combined efforts of paving driveways, installing curbs, and frequent sweeping was estimated to be a 9.43 percent reduction in PM-10 emissions for 1992 and an 11.91 percent reduction for 1994. It was assumed that half of the 1994 reduction would result from sweeping and washing and half would result from a program of driveway paving and curbing achieved over a six-year period.

The level of effort represented by ongoing street sweeping programs is reflected in base case forecasts of PM-10 emissions for the years 1992 and 1994. The commitments described above do not represent a significantly increased level of effort. Therefore no reduction credit was taken.

5. Vegetation and Windbreaks to Control Windblown Dust

On publicly owned lands such as parks and road medians, landscaping programs already are underway in numerous cities and towns. In addition, the City of Scottsdale indicated it will conduct a one-year test program in 1988-89 involving the planting of wildflowers along several miles of roadway in an undeveloped section of the city. On privately owned lands, zoning regulations

afford local governments some control over landscaping practices. For example, in rezoning decisions the City of Phoenix stipulates requirements for the landscaping of parking lots.

A 5.91 percent reduction in PM-10 emissions for 1992 and a 5.74 percent reduction for 1994 were attributed to an earlier version of this measure. The earlier version included the paving or watering of unpaved parking lots and other areas cleared of natural vegetation. The commitments received from MAG member jurisdictions do not contain enough detail to permit quantitative estimation of their impacts.

6. Restrictions on the Use of Blowers for Landscaping Maintenance (Areawide Strategy

Several cities indicated commitments for phasing out the use of blowers by municipal staff, but did not expect to impose such restrictions on the private sector. No areawide restrictions have been established by Maricopa County or the Arizona Legislature. This measure was not evaluated through computer modeling, and no PM-10 emission reduction credit was taken.

7. Watering, Vehicle and Street Washings at Construction Sites

Maricopa County develops and enforces regulations pertaining to dust control at construction sites. These regulations are complemented with local ordinances and enforcement by various cities and towns. The Arizona Department of Transportation, responsible for constructing a 233-mile system of new freeways throughout the region, complies with these regulations.

Modeling results indicated that more watering and washing could reduce PM-10 emissions by 2.31 percent in 1992 and 1994. Existing regulations and enforcement levels are reflected in future year base conditions. As implementation commitments do not reflect further improvement to the existing level of effort, no emission reduction credit was taken for this measure.

8. Industrial/Point Source Controls (Areawide Strategy)

Maricopa County develops and enforces emission control regulations pertaining to industrial sources and construction sites. The County has an ongoing program for the review and adoption of these regulations. Emission reductions due to control regulations are reflected in the modeled base year inventory as well as in future base case projections. Additional reductions would result if existing controls and/or enforcement levels were made more stringent. Modeling results indicated that this measure could potentially reduce PM-10 emissions by 0.34 percent in 1992 and 1994. On the basis of present commitments, no further emission reduction credit was taken.

9. Windbreaks for Controlling Particulates from Agricultural Activities

A number of cities and towns indicated that the acreage in agricultural land uses within their jurisdictions was extremely limited and was steadily declining due to development. Under such circumstances, initiating agricultural windbreaks would be ineffective in incorporated areas.

Modeling results indicate that agricultural windbreaks have the potential to reduce PM-10 emissions by 3.77 percent in 1992 and 3.60 percent in 1994. The projection of future base case emissions did take into account the decline in regional agricultural activity. On the basis of the existing commitments for implementation, no credit was taken for this measure.

10. Design Specifications and Catalytic Controls for Fireplaces and Wood Burning Stoves (Areawide Strategy)

This measure would require that all additional fireplaces and wood burning stoves installed within Maricopa County be certified as meeting certain emission standards. Maricopa County has indicated that on February 26, 1988, the U.S. Environmental Protection Agency promulgated a New Source Performance Standard applicable to new residential wood heaters. The County intends to request EPA authority to enforce the new standards.

Modeling results for this measure indicate a potential for reducing PM-10 emissions by 0.34 percent in 1992 and 1994. For purposes of evaluation, it is not clear that there exists a definite commitment to implement this measure. Credit for this measure will be taken at a later time, as appropriate.

11. Ordinances to Control the Use of Fireplaces and Wood Burning Stoves (Areawide Strategy)

Support for this measure among MAG member jurisdictions is limited, particularly in outlying communities. While some jurisdictions indicated that they would consider developing such ordinances, it would be premature to take credit for any reduction in particulate emissions from this measure at present. This measure was not evaluated through computer modeling.

12. Restrictions on Motorized Vehicles for Off-Road Use (Areawide Strategy)

Numerous MAG member jurisdictions, including Maricopa County, Phoenix, and Scottsdale, already enforce ordinances restricting off-road use by motor vehicles. Other cities and towns indicated commitments to develop or consider developing restrictive ordinances. Quantitative evaluation of this measure would require monitoring data for off-road vehicular activity. No computer modeling was conducted for this measure and no emission reduction credit was taken.

13. Requirements for Truck Covers (Areawide Strategy)

Numerous MAG member jurisdictions have indicated support for countywide truck cover requirements which could be established by action of the Arizona Legislature or by Maricopa County. In the absence of such requirements, implementation is proceeding on a voluntary basis. The City of Scottsdale has installed truck covers on a number of its municipal vehicles as part of an ongoing program. Several other cities are considering similar programs. At this time there is no indication of voluntary private sector participation.

This measure was not evaluated through computer modeling and no credit for PM-10 emission reduction was taken.

14. Maintaining Land After Zoning is Given but not Developed

This measure is aimed at maintaining vacant land in such a way that dust emissions would be controlled by native vegetation. A number of MAG member jurisdictions indicated that they would pursue implementation of this measure through existing zoning procedures and/or development of new ordinances. This measure was not evaluated through computer modeling and no credit for PM-10 emission reduction was taken.

15. Moving the State Fair Dates to March 1 through October 1 and/or Moving the Location of the State Fair

This measure would move the State Fair session out of the prime inversion season and/or away from a location which is already subject to high pollutant levels. MAG member jurisdictions have indicated widespread support for this proposal. Actual implementation would require action from the Arizona Legislature. At present, no PM-10 emission reduction credit can be taken for this measure.

16. Vehicle Inspection Maintenance Program - 1987 Legislation Statewide (Areawide Strategy)

This measure has received commitments of support from numerous MAG member jurisdictions. Modeling results indicate that PM-10 emissions could be reduced by 0.09 percent in 1992 and 0.11 percent in 1994, if the Arizona Legislature would require statewide implementation of the Vehicle Inspection Maintenance Program. In the absence of new legislation, no credit was taken for this measure.

17. Vehicle Inspection Maintenance Program - 1987 Legislation Countywide (Areawide Strategy)

This measure has received commitments of support from numerous MAG member jurisdictions. Modeling results indicate that PM-10 emissions could be reduced by 0.08 percent in 1992 and 0.10 percent in 1994, if the Arizona Legislature would require statewide implementation of the Vehicle Inspection Maintenance Program. In the absence of new legislation no credit was taken for this measure.

18. Short-Range Transit Improvements (Areawide Strategy)

Since the end of 1986, the Regional Public Transportation Authority (RPTA) has provided regional transit service to complement existing municipal fixed route and demand responsive services. Six new express routes began in December, 1986. Seven local routes began service in January, 1987 and nine local routes were added or modified in April, 1987. These improvements, funded from the $5 million annually available for RPTA service provision, were the basis on the short-range transit scenario modeled for this measure. Continued provision of the regional service will be funded with sales tax revenues as approved by Maricopa County voters in 1985 through the passage of Proposition 300.

In coordination with the RPTA effort, local transit improvements are being made by the cities of Mesa, Phoenix, Scottsdale, and Tempe. Other cities and towns are studying the potential for initiating local service. In addition, ADOT funded transit improvements in the East Valley area during 1987-88 using $40,000 of the $250,000 appropriated by the Arizona State Legislature for transit and ridesharing projects in nonattainment areas.

A 0.02 percent reduction in PM-10 emissions was estimated for 1992 based on these commitments. This scenario reflected the service improvements from the RPTA effort. This level of credit was taken for 1992 and 1994 because the RPTA service improvements have a continuing funding commitment.

19. Long-Range Transit Improvements (Areawide Strategy)

The Regional Public Transportation Authority, established in January, 1986, has as its primary mission the planning of a future rapid transit system. A draft plan unveiled in April 1988 will be finalized after months of extensive public review. The RPTA plan will be considered for voter approval in a sales tax referendum, expected to be held in February, 1989. The RPTA planning effort is being conducted with extensive cooperation from local governments.

Modeling results for a long-range transit scenario based on an earlier MAG study indicated a 0.86 percent reduction in PM-10 emissions in 1994. In the event that the voters approve the RPTA plan, air quality impacts will be assessed and credit will then be taken for this measure.

20. Exclusive Bus Lanes on Arterials and Freeways as Appropriate (Areawide Strategy)

The Regional Public Transportation Authority will pursue the introduction of exclusive bus lanes in cooperation with affected local jurisdictions. In addition, several cities are studying potential applications of this measure. Existing bus lanes on Central and First Avenues in Phoenix will be maintained. As additional applications are programmed for implementation, air quality benefits can be investigated. This measure was not modeled and no additional emission reduction credit was taken.

21. Expanded MAG Regional Ridesharing Program (Areawide Strategy)

The Maricopa Association of Governments is expanding the Regional Ridesharing Program through the Regional Public Transportation Authority. With a combination of Federal Highway Administration funds and monies from the Exxon Restitution Fund, the program has been expanded significantly. The staff has been increased from two to five people, with additional contract support for clerical activities. Three employer marketing representatives have been hired to work directly with Valley employers to design internal rideshare programs for each business.

The main objective for the program is to develop transportation management plans that will promote a number of different modes of travel such as transit, carpooling, vanpooling, bicycling. This will reduce the use of single occupant vehicles. Other measures such as alternative work hours will be promoted to help reduce localized congestion problems. The goal for the 1987 program

year was to develop programs in all local governments, the top 20 Valley employers and a wide variety of small and medium sized businesses. A total of 700 employers will be contacted by 1995. These goals correspond to the scenarios used for modeling this measure.

Related efforts to encourage ridesharing will be implemented through the Capitol Complex Rideshare Program, administered through the Energy Office of the Arizona Department of Commerce. The Arizona Department of Transportation (ADOT) will contribute funding for this program. In addition, a number of cities will administer in-house ridesharing promotion for their employees. Other cities and towns will publicize and promote ridesharing through various public information efforts.

The PM-10 emission reduction for the modeled version of this measure was 0.03 percent in 1992. Based on increasing program activity over time, a credit of 0.05 percent was estimated for 1994. These figures reflect the continuity of the expanded MAG Regional Ridesharing Program, as well as commitments to associated measures for which no additional credit was taken. Such measures include Park and Ride Lots, Preferential Parking for Carpools and Vanpools, and Auto Free Zones and Pedestrian Malls Where Appropriate.

22. Model Trip Reduction Ordinance - Employer Based Transportation Management (Areawide Strategy)

The Maricopa Association of Governments initiated the development of a model trip reduction ordinance in July, 1987. In March, 1988 the MAG Regional Council tabled consideration of a draft model ordinance pending the outcome of the expected February, 1989 referendum on funding for a regional public transit system. When finalized, the model ordinance will be considered for adoption by Maricopa County and the MAG cities and towns. Additionally, the 1987 Arizona air quality legislation specifically grants to counties, cities, and towns the power to make and enforce trip reduction ordinances, beginning in 1989. As such ordinances are adopted and implemented, credit can be taken for the emission reduction benefits resulting from this measure. Based upon the scenario modeled for trip reduction ordinances, this measure has the potential to reduce PM-10 emissions by 0.86 percent in 1992 and 1.11 percent in 1994. At this time, no credit was taken.

23. Voluntary No Drive Days Program (Areawide Strategy)

The Phoenix Metropolitan Chamber of Commerce and the Regional Public Transportation Authority co-sponsored the first annual Voluntary No Drive Days Program from October 15, 1987 through January 15, 1988. Numerous MAG member jurisdictions supported and promoted this effort. The program promoted regular driving restraint during the carbon monoxide season. By encouraging the public to observe one no drive weekday every week, the program brought about a reduction in average weekday vehicle miles of travel (VMT).

Based upon the results of the first year of the program, the program sponsors project a 4 percent VMT reduction for 1988-89. The long-range goal of the

program is a 10 percent VMT reduction by 1995. Modeling results presented in Table 5-1 reflect a 3 percent VMT reduction for 1992 and a 10 percent reduction for 1994. Straight-line interpolation of the program goals yields a PM-10 emission reduction of 3.67 percent for 1992 and 4.71 percent for 1994.

An important consideration with regard to the Voluntary No Drive Days Program is that it will be in effect only for about three months each year. The impacts of such a program would be relevant to a modeling approach based on a design day, as may be used in the Phase Two PM-10 Plan, but are not amenable for use in an approach based on annual average concentrations. It was also recognized that credit for this measure can be taken in terms of component measures which contribute to the success of the Voluntary No Drive Days Program. The component measures include Short-Range Transit Improvements, Expanded MAG Regional Ridesharing Program, Increased Bicycle Use, Pedestrian Travel, Alternative Work Weeks, and Telecommunications.

On this basis, it was decided that no specific credit should be taken for the Voluntary No Drive Days Program in the Phase One PM-10 Plan.

24. Areawide Public Awareness Program (Areawide Strategy)

The Phoenix Metropolitan Chamber of Commerce conducted an areawide public awareness program called the "Clean Air Force" campaign during the six month period which began on November 17, 1986. This program established a public awareness base which contributed to the success of the Voluntary No Drive Days Program in 1987-88. This measure was not modeled and no PM-10 emission reduction was taken.

25. Park and Ride Lots (Areawide Strategy)

The Regional Public Transportation Authority was instrumental in the establishment of thirteen new park and ride lots in November, 1986 and is continuing to work with local governments to identify potential sites for additional lots. Commitments for providing additional lots have been made by Phoenix, Tempe, and the Arizona Department of Transportation. The City of Phoenix will take necessary actions to implement a new transit center in the Sunnyslope area at a cost of $650,000. During 1988, final design and lease arrangements will be initiated for new transit facilities at Westridge Mall at a cost of $100,000. In addition, engineering and design will begin on a new $7.6 million express bus terminal to be located at Central Avenue and the Papago Freeway. A Paradise Valley Mall transit center is budgeted at $230,000. Also budgeted are two park and ride lots at $2,795,000.

Utilization of park and ride lots tends to be correlated to the level of transit service provided and ridesharing activity. Therefore, park and ride lots were not separately evaluated through computer modeling, and no separate credit was taken for this measure.

26. Financial Incentives Including Zero Bus Fares (Areawide Strategy)

Several commitments were made during 1987 which may increase the use of financial incentives in the near future. The 1987 Arizona air quality

legislation provides that businesses may take Arizona State tax deductions for the costs of providing transit subsidies to their employees. The 1987 legislation also requires the Director of the Arizona Department of Administration to adopt rules which will permit reimbursement of transit costs to State employees.

The City of Phoenix is considering expansion of its existing transit subsidy program for municipal employees. In addition, Maricopa County began subsidizing 50 percent of the transit fares paid by its employees as of December, 1987. Mesa and Tempe are in the process of developing similar programs. Numerous cities and towns also indicated that they would review the MAG Model Trip Reduction Ordinance when it is completed, as a basis for considering implementation of financial incentives.

Originally, this measure was modeled on the basis of free bus fares twenty-four hours each day for all trip purposes. This produced a 0.11 percent emission reduction in 1992. As data becomes available on the number of companies taking advantage of the State tax incentive, as well as participation levels in government programs, air quality benefits can be fully assessed. No emission reduction credit was taken for these commitments at this time.

27. Preferential Parking for Carpools and Vanpools (Areawide Strategy)

The 1987 Arizona air quality legislation required the Director of the Arizona Department of Administration to designate preferential spaces for carpools and vanpools in State employee parking lots. Additional commitments to provide such spaces were made by Maricopa County and the City of Scottsdale. Numerous other cities and towns will consider the results of the MAG Model Trip Reduction Ordinance as a basis for implementing this strategy. In addition, the Regional Public Transportation Authority will encourage both public and private employers to implement the preferential parking measure.

This measure will promote regional ridesharing and thus contribute to the success of the Voluntary No Drive Days Program. It would also be useful in support of trip reduction ordinances. This measure was not individually evaluated through modeling and no emission reduction credit was taken.

28. Mandatory Parking Charges for Employees (Areawide Strategy)

The Maricopa Association of Governments included a study of coordinated parking management in the development of a model trip reduction ordinance. Consideration of the MAG Model Trip Reduction Ordinance has been tabled until 1989. Member jurisdictions will review the results of the MAG study as a basis for considering an areawide strategy of mandatory parking charges. The scenario modeled for this measure assumed a parking charge of one dollar per day. On this basis, the potential PM-10 emission reductions were estimated to be 0.33 percent in 1992 and 1994. At present, no jurisdiction has committed to implement mandatory parking charges. Therefore no emission reduction credit was taken for this measure.

29. High Occupancy Vehicle Lanes on Freeways (Areawide Strategy)

The Arizona Department of Transportation, in cooperation with local jurisdictions, is responsible for constructing the planned MAG Freeway/Expressway System. ADOT has committed to open high occupancy vehicle (HOV) lanes on Interstate 10 and the East Papago Freeway, which will encourage ridesharing and transit use. In FY 1988 and FY 1989, $81 million in Federal highway funds, including approximately a seven percent State match are programmed for completion of the Interstate 10 Inner Loop including HOV lanes. Also integrated into the design of Interstate 10 is a major regional transit transfer station, and provisions for a freeway traffic surveillance and control system. In FY 1988, an additional $7.4 million in Federal and State funds are programmed specifically for adding HOV lanes on Interstate 10 between 40th Street and Superstition Freeway. HOV lanes also will be considered for possible implementation in other freeway corridors.

The scenario originally modeled for this measure was based on hypothetical implementation of HOV lanes on all freeways existing in 1995, yielding an estimated 1.63 percent reduction in PM-10 emissions. This result was reduced in proportion to the mileage actually committed resulting in an estimated emission reduction of 0.18 percent for 1994.

30. High Occupancy Vehicle Lanes on Existing Arterials as Appropriate

A number of cities and towns indicated they would be considering this measure, but no specific commitments to implement high occupancy vehicle lanes on arterials have been made. This measure was not evaluated through computer modeling and no emission reduction credit was taken.

31. High Occupancy Vehicle Ramps Which Bypass Freeway Ramp Metering Signals (Areawide Strategy)

The Arizona Department of Transportation, in cooperation with local jurisdictions, is responsible for constructing the planned MAG Freeway/Expressway System. This includes the construction of freeway entry ramps where bypasses could be built to enable high occupancy vehicles to access the freeway without being delayed by ramp metering controls. To facilitate such HOV bypasses when warranted by traffic demands, ADOT is preparing designs to accommodate the construction of extra wide ramps in all future freeway corridors. In addition, an HOV bypass was opened in June, 1987 to facilitate southbound bus access to the Black Canyon Freeway at Dunlap Avenue.

The construction of freeway ramps designed to accommodate HOV bypasses is an important step toward implementing this measure. As a definite schedule for bypass implementation is developed, a basis for estimating emission reduction benefits will be more readily available. At this time no specific emission reduction credit was included for this measure.

32. Mitigation of Freeway Construction Impacts (Areawide Strategy)

The Arizona Department of Transportation will maintain a driver information program which mitigates the degree of traffic congestion resulting from

freeway and expressway construction. Public information efforts will be pursued in cooperation with other MAG member jurisdictions to mitigate the traffic impacts of constructing new freeways and expressways in the MAG area. Similar efforts are presently underway with respect to construction of a major interchange connecting Interstate 17 and Interstate 10, in Phoenix. The City of Phoenix has been actively involved in this effort.

Modeled air quality estimates did not explicitly take into account the detours, land closures, or traffic delays which occur on existing roadways as the result of freeway construction. In general, these are short-term, localized impacts not relevant in the prediction of average traffic projections for most planning purposes. Measures taken to mitigate these traffic impacts typically do not improve traffic flow to a level better than the assumed base conditions. Therefore emission reduction credit was not included for this measure.

33. and 34. Freeway Surveillance, Ramp Metering, and Signage (Areawide Strategy)

The Arizona Department of Transportation will install loops and conduits in new freeways to facilitate the installation of ramp meters as traffic volumes warrant. In the existing Interstate 17/Interstate 10 corridor, $24.8 million in Federal Highway funds, including approximately a seven percent State match, have been programmed over the next five years for installation of an extensive freeway management system. This system may include a control center, detector loops, call boxes, television cameras, variable message signs, lane control signs and ramp meters.

This measure was not evaluated through computer modeling and no PM-10 emission reduction credit was taken.

35. Computerized Synchronization of Traffic Signals

Significant portions of the street system in the region currently benefit from signal synchronization. In addition, the 1987 Arizona air quality legislation requires synchronization of traffic signals on streets with average daily traffic volumes over 15,000. This requirement will lead to continued expansion of the network of coordinated signals to keep pace with the growth in traffic in the region.

A number of jurisdictions are already in the process of improving and expanding their synchronization systems. Over three million dollars in signal improvements were included in the commitments submitted by Glendale, Mesa, Phoenix, Scottsdale, and Tempe. This measure was not evaluated through computer modeling and no PM-10 emission reduction credit was taken.

36. Reversible Lanes on Arterials

Street mileage readily conducive to the application of reversible lanes has been converted in congested central areas. These streets will continue to be maintained as reversible lane facilities and have been reflected accordingly in base condition forecasts. The potential for the application of reversible lanes on additional facilities will receive ongoing evaluation by MAG member

jurisdictions. However, specific additional miles are not planned at this time and no reductions in emissions were credited for this measure.

37. One Way Streets

One way street applications have been implemented in a number of areas where they yield major traffic flow benefits. These streets will continue to be maintained as one way facilities and have been reflected accordingly in base condition traffic forecasts. In addition, the City of Phoenix has included over $2.7 million for two one way street projects in its Six Year Major Street Improvement Program. Other MAG member jurisdictions are studying potential new applications on an ongoing basis. This measure was not evaluated through computer modeling, and no additional emission reduction credit was taken.

38. Truck Restrictions During Peak Periods

The potential benefits of peak period truck restrictions are being investigated as part of the MAG study concerning the model trip reduction ordinance and coordinated parking management program. The results will be used by the MAG member jurisdictions as a basis for considering possible implementation of this measure. No emission reduction credit was taken for this measure at this time.

39. Intersection Improvements

Numerous MAG member jurisdictions have ongoing commitments to a wide range of street and intersection improvement projects. These projects are generally reflected in the MAG Regional Transportation Improvement Program (TIP) which is a five-year guide for street, transit and airport projects in the region. For modeling purposes, base year street network characteristics were developed on the basis of improvements outlined in the TIP. These projects are implicit in the base condition forecasts and no additional credit was taken for specific individual project commitments.

40. On-Street Parking Restrictions

A number of MAG member jurisdictions already have on-street parking restrictions or programs underway leading to restrictions. In general, parking on major arterials is extremely limited. This has been incorporated into the modeling process for estimating future traffic conditions. Therefore this measure was not separately modeled, and no emission reduction credit was taken.

41. Bus Pullouts in Curbs for Passenger Loading (Areawide Strategy)

Several MAG member jurisdictions have identified project commitments involving the installation of bus pullouts. For example, the City of Phoenix will construct approximately 50 bus pullouts annually in conjunction with major street construction. Phoenix has received $1,064,800 Federal grant for bus pullout construction and has programmed $200,000 of Local Transportation Assistance funds annually for this effort. In addition, Phoenix will encourage private construction of bus pullouts in conjunction with new

developments. This measure was not evaluated through computer modeling and no specific emission reduction credit was taken.

42. Increased Bicycle Use

Encouragement of bicycle use can consist of bicycle promotion, system planning, and educational activities, complementary to the provision of actual facilities. Numerous cities and towns have committed to participate in such activities. The 1987 Arizona air quality legislation requires that bicycle use be considered in county and municipal land use plans. All of these efforts will make bicycling a more viable transportation alternative.

For modeling purposes, it was assumed that an achievable goal for increased bicycle use would be a one percent reduction in auto trips of six miles or shorter. This scenario yielded a 0.8 percent reduction in modeled PM-10 emissions for 1992, and a 0.9 percent reduction for 1994. Based on the significant support for this measure and a closely related measure, Bicycle Travel and Support Facilities, the full modeled emission reduction was credited.

43. Bicycle Travel and Support Facilities

Significant levels of bicycle facility planning and provision are reflected in the commitments of Maricopa County and numerous MAG cities and towns. Five cities have programmed funds for facility provision, while other cities and towns are developing bicycle plans or using zoning processes to encourage or require private sector participation. For example, the City of Phoenix reports that a bicycle plan element delineating 400 miles of bike routes and facilities is proposed for incorporation into the City of Phoenix General Plan during 1987-88.

As another example, the City of Tempe has in place an extensive bikepath system and is continuing to improve and expand that system based upon a comprehensive study of bicycle needs and desires. More than 30 miles of bikepaths are already in place. Budgeted for 1987-88 are other bikepath improvements totaling $340,000, and projected for 1988-89 through 1991-92 are enhancements totaling an additional $1,731,000.

The air quality benefits from bicycle travel and support facilities are reflected in the emission reductions credited to the preceding measure, Increased Bicycle Use.

44. Pedestrian Travel

Pedestrian travel in lieu of automobile use may be a feasible alternative for a variety of trip purposes in downtown areas and for certain short trips in suburban areas. Sidewalks, crosswalks, and other pedestrian amenities are typically included with most street construction in areas of at least moderate development density, often provided as a requirement in land development. Thus, most cities and towns in the Maricopa County area have ongoing commitments for the provision, or requirement, and maintenance of these facilities.

The scenario developed to model this measure assumed that pedestrian travel could be used in place of five percent of all vehicle trips of less than one-half mile in length. This yielded an emission reduction estimate of 0.03 percent for 1992. Given that no credit was taken for associated measures such as Auto Free Zones and Pedestrian Malls Where Appropriate and Pedestrian and Bicycle Overpasses Where Safety Dictates, the full modeled reduction was credited for this measure.

45. Pedestrian and Bicycle Overpasses Where Safety Dictates

Grade separated pedestrian and bicycle crossings of heavily traveled, high speed arterials can improve safety and reduce delay for both motorists, bicyclists, and pedestrians alike. A number of pedestrian and bicycle overpasses already exist in the region, and additional facilities will be considered where appropriate. For example, the City of Phoenix reports that $2,343,000 is budgeted for the construction of a number of underpasses during the next five years. Tempe has budgeted $300,000 for two pedestrian overpasses in 1987.

The benefits from this measure would be reflected in increased pedestrian travel, as addressed in the preceding measure. Therefore no specific emission reduction credit was taken for pedestrian and bicycle overpasses.

46. Conversion of Buses to Alternative Fuels and Use of Electric Buses for Shuttle Service (Areawide Strategy)

The 1987 Arizona air quality legislation requires that beginning in 1990, all buses purchased by a city, town, or county for operation in a nonattainment area must use clean burning fuels. This requirement does not require the retrofitting of buses purchased prior to January 1, 1990. The requirement will yield increasing emission reductions over time, as newly purchased buses gradually replace older buses, until the entire stock of buses has been replaced.

This measure was not evaluated through computer modeling and no emission reduction credit was taken.

47. Use of Emissions Control Devices on Public Diesel Powered Vehicles (Areawide Strategy)

As described in the measure adopted by MAG and its member jurisdictions, public transit providers would be responsible for using emission control devices on publicly owned diesel powered vehicles when these devices become economically and technologically feasible. The City of Scottsdale has been involved in the development of an experimental diesel filter and will continue to pursue this technology. The Regional Public Transportation Authority, Scottsdale, and the other MAG member jurisdictions operating diesel powered buses in the Maricopa County area will continue to monitor national developments in the search for suitable emission control devices. This measure was not evaluated through modeling and no emission reduction credit was taken.

48. Alternative Work Hours (Areawide Strategy)

The purpose of alternative work hours is to promote off-peak driving and to facilitate ridesharing and transit use. A related measure, Alternative Work Weeks, reduces the total number of work trips by condensing a given number of work hours into a smaller number of work days. The MAG Regional Rideshare staff will actively promote alternative work hours in presentations to private employers and local jurisdictions. This will occur as part of the employer outreach efforts described under a related measure, Expanded MAG Regional Ridesharing Program. Alternative work hours also will be promoted by several of the MAG member jurisdictions. Many of these jurisdictions already have alternative work hour programs for their own employees, or have committed to study this measure for possible implementation.

In addition to the efforts described above, legislated requirements for the use of adjusted work schedules apply during the carbon monoxide season. Under the 1987 Arizona air quality legislation, the Director of the Arizona Department of Administration must require the use of adjusted work hours for at least 85 percent of State employees with offices located in a nonattainment area. The requirements will apply each year, beginning October 1 and ending April 1. Beginning in 1989, the requirement will also be applied to County employees and to the employees of cities and towns which have a population of 50,000 or more.

With respect to the private sector, the 1987 legislation requires businesses to prepare an adjusted work hour proposal for submittal to the Department of Environmental Quality by October 1 of each year. This requirement applies to firms with 500 or more employees at one site in a nonattainment area. This measure was not modeled and no emission reduction credit was taken.

49. Alternative Work Weeks (Areawide Strategy)

The use of alternative work weeks reduces the total number of work trips needed to facilitate a given number of work hours on a weekly basis. A related measure, Alternative Work Hours, does not change the total number of work trips, but provides flexibility regarding the times at which work trips are made. For jobs where full-time availability of services is required, the use of alternative work hours may be clearly preferable to the use of alternative work weeks. Implementation of alternative work weeks will be pursued by the MAG Regional Rideshare staff and MAG member jurisdictions by the means described for Alternative Work Hours.

For 1992 and 1994 respectively, a 0.10 percent reduction and a 0.51 percent reduction were estimated, based upon increasing levels of employee participation. There remains the potential that such reductions may be achieved, but at this time no credit was taken for this measure.

50. Telecommunications - Telecommuting (Areawide Strategy)

With the availability of computerized telecommunications, increased potential exists to reduce commuting and travel for other purposes through the substitution of electronic communications. Several cities have pursued this option as major employers, while many others anticipate future study and

promotion of the concept. As the use of telecommunications increases in the future, regional emission reductions will be felt. For example, it was modeled that if telecommunications could reduce the use of motor vehicles by three percent in 1994, PM-10 emissions would be reduced by an estimated 1.71 percent. However, based upon the level of commitments existing at this time, no credit was taken for emission reductions for this measure.

51. Telecommunications - Teleconferencing (Areawide Strategy)

The circumstances for this measure are similar to those described for the preceding measure. Thus, no emission reduction credit was taken.

52. Evaluation of the Air Quality Impacts of New Development and Mitigation of Adverse Impacts (Areawide Strategy)

The 1987 Arizona air quality legislation requires every State agency, board, and commission to submit an air quality impact report to the Department of Environmental Quality on any State-funded transportation related project that it determines may impact air quality.

In addition, most MAG member jurisdictions have indicated that existing or planned development review procedures will include evaluation of the impacts of new development on air quality, with the goal of reducing negative impacts.

This measure was not evaluated through computer modeling, and no emission reduction credit was taken.

53. Land Use Patterns Which Support Public and Rapid Transit

The encouragement of land use patterns which support public and rapid transit can play an important long term role in reducing vehicle miles of travel and increasing transit usage. Based on the scenario originally modeled for this measure, a 0.2 percent reduction in emissions was estimated for 1995, in addition to the benefits of transit without altered land use.

Areawide interest in this measure was demonstrated by the commitments of numerous MAG member jurisdictions to pursue the issue in their land use planning processes. This is a long term measure, and its primary benefits will be closely tied to the success of the long-range transit plans being developed by the Regional Public Transportation Authority. Therefore no emission reduction credit was taken for this measure at this time.

54. Reduced Idling at Drive-Up Facilities

Vehicular emissions may be reduced by discouraging extensive idling for drive-up service by vehicles not equipped with catalytic converters. This could be accomplished, for example, by posting signs to discourage idling by older vehicles at drive-up facilities. A number of cities and towns indicated they would promote a voluntary approach to this measure through public information channels and contacts with merchants. Because of the generally voluntary nature of this measure with no past indicators of the possible level of participation, no specific emission reduction credit was taken.

55. Auto Free Zones and Pedestrian Malls Where Appropriate

Auto free zones can help alleviate hot spot area problems and discourage use of automobiles in favor of public transportation. Virtually all MAG member jurisdictions indicated that auto use was discouraged in current land use planning or will be addressed in future planning. For example, Scottsdale and Mesa have auto free zones in place or under development. With the success of the Civic Center Mall, Scottsdale has taken a nationally recognized leadership position in providing high amenity pedestrian mall space. The City has explored the use of incentives to encourage downtown plazas as part of the Downtown Plan. Free parking and shuttle service is provided to encourage pedestrian travel. The Downtown Plan also provides incentives for pedestrian plazas and the Canal Bank Committee recently conducted a full planning study on an auto free zone along the Arizona Canal in downtown Scottsdale. Many of the proposed improvements will be provided as a condition of development.

The City of Mesa has been pursuing this measure in the revitalization of its downtown area. The master plan of this ten-acre site calls for the inner core of the development to be an auto free zone. A series of parking garages will be built in the outer area, thus essentially creating an auto free zone in the core area. Future downtown redevelopment sites will be planned in a similar manner.

This measure was not evaluated through computer modeling, and no emission reduction credit was taken.

56. Enforcement of Traffic, Parking, and Air Pollution Regulations (Areawide Strategy)

Recognition of the need for more effective enforcement is evident in the 1987 Arizona air quality legislation. The establishment of the air quality compliance sticker program will give law enforcement officials a means of visual verification to determine whether or not a vehicle is in compliance with the requirements of the State Vehicle Inspection Maintenance program. The sticker program will be fully in place for this purpose as of January 1, 1989.

Commitments were received from several MAG member jurisdictions to review their existing law enforcement practices and determine whether or not additional emphasis can be given to enforcing air quality statutes. In terms of reducing particulate emissions, these efforts do not have readily quantifiable impacts and therefore no quantitative credit was taken.

57. Expansion of the Areawide Monitoring Network (Areawide Strategy)

This measure would involve the expansion of the existing air quality monitoring network to include additional areas. Although no reduction in emissions would result from this action, its implementation could prove beneficial. Expansion of the monitoring network would promote a better understanding of regional air pollution problems, thus facilitating better application of air pollution control measures. Maricopa County will conduct a study to determine where an additional site or sites could be most

beneficial and appropriate. The conclusions of the study will be used as the basis for pursuing the additional funds which would be necessary to support any new sites.

58. Winter Daylight Savings Time

Air pollution modeling efforts completed in April, 1987 indicated that utilization of a one hour clock shift strategy, or Daylight Savings Time, would have the potential to reduce carbon monoxide concentrations significantly during winter months. This measure was not evaluated as a PM-10 emission reduction strategy.

59. Contingency Plan

The MAG Air Quality Policy Committee will review the annual progress made to reduce particulate pollution in the Maricopa County Area. If necessary, the Committee will consider strengthening existing measures and recommending additional measures for inclusion in the Phase Two Particulate Plan for PM-10. MAG member jurisdictions have indicated their support for this approach, and their willingness to strive for additional air quality improvement.

COMBINED IMPACT OF COMMITTED MEASURES

Based on the estimated impacts of the individual control measure commitments, an evaluation of their combined impact was conducted. As in prior evaluation of packages of measures, care was taken to avoid double counting benefits from measures with overlapping areas of effectiveness. In addition, individual impacts were not simply added together but combined in a multiplicative fashion to account for reductions in base levels due to the effects of other measures.

In the evaluation of the combined effects of commitments, no credit was taken for the Voluntary No Drive Days Program, but full credit was taken for Short-Range Transit Improvements, Expanded MAG Regional Rideshare Program, High Occupancy Vehicle Lanes on Freeways, Increased Bicycle Use, and Pedestrian Travel. In addition, no credit was taken for any of the measures for which commitments were received but no reduction estimate was prepared. Full credit also was taken for Use of Number One Diesel Fuel or Number Two Diesel Fuel with Diesel XL in Maricopa County. Table 8-1 indicates the emission reduction credits taken for these measures.

On this basis, the combined impact of the commitments was estimated to result in a 0.17 percent reduction in PM-10 emissions for 1992 compared to base conditions. For 1994, the reduction from base conditions was estimated to be 0.38 percent.

ATTAINMENT STATUS

In Chapter Three it was estimated that emission reductions of 34.4 percent by 1992 and 36.6 percent in 1994 would be needed to attain the national PM-10 standard. These goals are compared, with the estimated impacts of the committed control measures by year below.

Year	Emissions Reduction Goal	Emissions Reduction From Commitments
1992	34.4%	0.17%
1994	36.6%	0.38%

As may be observed, the emission reduction estimated to result from the commitments is less in each year than the target reduction required to meet the national standard. Based on this evaluation, it is estimated that the Maricopa County Area will not achieve the PM-10 standard by 1994.

It should be recognized that MAG member jurisdictions and other implementing agencies submitted a broad range of commitments beyond those taken directly into account in the determination of attainment status. These commitments address a variety of strategies and will result in lower emissions. However, in many cases the impacts of these measures were not readily quantifiable, and no credit was taken for emission reductions. Nevertheless, they clearly represent additional efforts by MAG members to reduce emissions and improve air quality.

In addition, no credit was taken for several adopted measures which have significant potential benefits but are currently under study prior to possible implementation. For example, the extensive planning work of the Regional Public Transportation Authority may eventually lead to the implementation of a regional rapid transit system. Also in this category is the MAG Model Trip Reduction Ordinance, including parking management and truck restriction strategies, which may be considered for possible adoption in 1989.

Finally, it is important to note that significant measures were incorporated into the base emission levels utilized for 1992 and 1994. The most notable of these was the continuing effort to pave unpaved roads and streets which produced reductions of 3.9 percent and 5.3 percent in 1992 and 1994, respectively.

APPENDIX O

MAG 1991 PARTICULATE PLAN FOR PM-10 WITH 1993 REVISIONS EXCERPTS REGARDING CONTROL MEASURE COMMITMENTS AND SCHEDULES

CHAPTER SEVEN

THE ADOPTED PLAN

Formal resolutions with commitments to implement particulate pollution control measures were received from MAG member agencies in October 1991. These resolutions were reviewed in order to determine which measures received firm commitments for inclusion in the MAG 1991 Particulate Plan for PM-10. According to the Arizona Department of Environmental Quality (ADEQ), the criteria for a firm commitment include: measures with the implementation schedule, funding and time frame specified; ongoing programs; commitments to implement measures without a specific funding source identified; commitments to draft documents; and commitments to conduct feasibility studies. Jurisdictional support for a measure is not a firm commitment unless the jurisdiction also agrees to enforce the measure. Measures with firm commitments were analyzed by ADEQ to determine which measures could be used for numeric credit towards attainment.

It is important to note that a broad range of commitments were received, addressing implementation of measures in the plan. The extensive commitments from MAG member jurisdictions demonstrate the level of effort that is being made to improve air quality in the region. In the determination of attainment status, specific emissions reduction credits were not taken for commitments where the basis for estimating air quality benefits was limited. However, in many cases these commitments will produce emissions reductions above and beyond what has been quantified in the evaluation of attainment status. These measures represent additional efforts by MAG member jurisdictions to reduce emissions and improve air quality. It is anticipated that as additional experience is gained in the implementation of these measures, a more detailed assessment of their air quality benefits can be developed and reported.

A summary of the firm commitments received for implementing particulate pollution control measures is provided below. The summary includes commitments for measures from the list of suggested measures recommended by the MAG Air Quality Policy Committee, measures which received firm commitments from the Arizona Department of Environmental Quality for feasibility studies, commitments received for additional measures beyond the suggested list, as well as commitments received for the Contingency Plan.

ANALYSIS OF PLAN COMMITMENTS RECEIVED FROM THE SUGGESTED LIST OF MEASURES

Two sets of measures were contained on the suggested list of measures recommended by the MAG Air Quality Policy Committee. The first set consists of the Reasonably Available Control Measures identified by the U.S. Environmental Protection Agency. The second set consists of measures which were adopted by the MAG Regional Council for the MAG 1988 Particulate Plan for PM-10.

REASONABLY AVAILABLE CONTROL MEASURES (RACM) AS IDENTIFIED BY THE ENVIRONMENTAL PROTECTION AGENCY

RACM 1. Paving, Vegetating, and Chemically Stabilizing Access Points (Areawide Strategy)

A number of cities and towns indicated that they will continue their ongoing efforts to pave and stabilize access points. A few cities committed to requiring the connection of paved driveways to the roadways for new homes beginning in December 1993. The City of Avondale will identify access points and initiate a program by July 1992. The Town of Gilbert will also identify access points and stabilize by December 1993. By December 1993, the Town of Guadalupe will identify and stabilize access points and require paving of access points during development. In addition, Maricopa County has indicated the requirement of paving new access roads that connect to a county road through its permitting authority.

RACM 2. Dust Control Plans for Construction or Land Clearing (Areawide Strategy)

This measure has received continued commitment through zoning procedures and/or ordinances from numerous MAG member jurisdictions. A few cities indicated that they will adopt an ordinance for building permits by December 1993. Maricopa County has also indicated that the dust control plan requirements will be revised.

RACM 3. Covering Haul Trucks (Areawide Strategy)

The MAG Regional Council has requested that this measure be implemented regionwide by the State of Arizona or Maricopa County. A number of MAG member jurisdictions indicated support for the MAG request to require truck covers countywide. Also, a few cities indicated ongoing commitments for covering municipally-operated trucks. The Town of Paradise Valley will enact an ordinance during 1991/1992 year. Maricopa County indicated that county-operated trucks will be covered by June 1993 and will draft a document by May 1992.

RACM 4. Traffic Rerouting or Rapid Clean Up of Temporary Sources of Dust on Paved Roads (Areawide Strategy)

Many cities and towns indicated an ongoing commitment to this measure. Maricopa County will clean up significant sources of dust on County roads within four hours and provide radio contact with sweepers.

RACM 5. Prohibition of Unpaved Haul Roads, and Parking or Staging Areas (Areawide Strategy)

A number of municipalities indicated that they will continue their ongoing efforts to implement this measure. A few jurisdictions committed to adopting ordinances with police enforcement by December 1993. The City of Avondale will draft an ordinance by June 1992. The Maricopa County Flood Control District will incorporate this

measure into formal policy by October 1992. Also, the County Planning and Development Department will draft a zoning ordinance amendment by January 1991. The Arizona Department of Transportation indicated it does not have any permanent unpaved haul roads, parking, or staging areas in the MAG region.

RACM 6. Traffic Reduction Plans for Unpaved Roads (Areawide Strategy)

Numerous MAG member jurisdictions indicated that this measure was not reasonably available or not applicable due to the lack of or limited amount of unpaved roads within their jurisdiction. A few cities, along with Maricopa County, are opting to pave the unpaved roads instead of attempting to enforce traffic reduction plans.

RACM 7. Limit Use of Recreational Vehicles on Open Land (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by the State of Arizona and Maricopa County. This request has received support from a number of the MAG member jurisdictions, and a few cities indicated continued commitment to the measure. Maricopa County indicated that: the Flood Control District will post and maintain lands within its jurisdiction; this is an ongoing measure for the Parks and Recreation Department; and the Bureau of Air Pollution Control will prepare a draft document.

RACM 9. Curbing, Paving, or Stabilizing Shoulders of Paved Roads (Areawide Strategy)

This measure has received continued commitment from a number of the cities and towns. Also, a few cities committed to eliminating dirt shoulders on new paving projects by December 1993. The installation of curbing is often provided as part of street improvements related to land development.

RACM 10. Paving or Chemically Stabilizing Unpaved Roads (Areawide Strategy)

A number of the MAG member municipalities committed that they would continue their efforts to pave or stabilize unpaved roads. Maricopa County indicated that it will pave 25 miles of unpaved roads per year. The Town of Guadalupe indicated that it will pave or chemically stabilize unpaved roads and alleys. The City of Goodyear will stabilize the 5.5 miles of alleys annually beginning in FY 1991-1992. The Town of Gilbert will stabilize all 5.0 miles of unpaved roads and treat as needed beginning in FY 1991-1992. The Town of Paradise Valley indicated that an ordinance will be enacted during the 1991/1992 year. Several towns reported that all their dirt roads have been or soon will be paved.

RACM 11. Paving, Vegetating, or Chemically Stabilizing Unpaved Parking Areas (Areawide Strategy)

A number of MAG member jurisdictions have continued their commitment to pave or stabilize unpaved parking areas. The Town of Paradise Valley will enact an ordinance during 1991/1992 year. The Arizona Department of Transportation indicated there are no unpaved parking areas within the agency's jurisdiction.

RACM 12. Dust Control Measures for Material Storage Piles (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County indicated that it will continue its ongoing efforts to implement this measure.

RACM 13. Storm Water Drainage to Prevent Water Erosion Onto Paved Roads (Areawide Strategy)

The MAG member jurisdictions indicated widespread continued commitment for this measure.

RACM 14. Revegetation, Chemical Stabilization, or Other Abatement of Wind Erodible Soil (Areawide Strategy)

Landscaping programs already underway in numerous cities and towns will be continued. Maricopa County indicated it will prepare and implement a program for county parcels and amend zoning ordinances to require development projects to comply with the measure. A few jurisdictions indicated adoption of an ordinance with police enforcement would be implemented by December 1993.

RACM 16. Episode Curtailment Program for Residential Wood Combustion (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County will establish a voluntary program to be initiated by November 1992. Also, the City of Tolleson indicated the use of a public notice for a voluntary no-burn program beginning in January 1992. A number of the cities and towns support the MAG request.

RACM 17. Public Information Program on Wood Stove and Wood Heat (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County will establish and implement a public information program by October 1992.

RACM 18. Improved Performance of Woodburning Devices (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County indicated that a program will be developed to be initiated by November 1992.

RACM 19. Inducements to Reduce the Number of Stoves and Fireplaces (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County will identify inducements by March 1992.

RACM 20. Establishment of a Smoke Management Program (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by Maricopa County. Maricopa County indicated that this is an ongoing measure.

RACM 21. Application of Reasonably Available Control Technology to Existing Stationary Sources (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by the Arizona Department of Environmental Quality or Maricopa County. Maricopa County indicated that this is an ongoing measure. In addition, Rule 311 will be evaluated and revised and a new rule for non-metallic processing will be developed.

AIR POLLUTION CONTROL MEASURES ADOPTED BY THE MAG REGIONAL COUNCIL FOR THE MAG 1988 PARTICULATE PLAN FOR PM-10

MAG 2. Use of Number One Diesel Fuel or Premium Diesel Fuel in Maricopa County (Areawide Strategy)

The MAG Regional Council has requested that this measure be implemented regionwide by the State of Arizona. Widespread support for this measure has been indicated by the cities and towns. Also, Maricopa County has indicated it will require the use of Number One Diesel fuel in all county vehicles by June 1993. The City of Phoenix is currently using Jet Fuel A in fleet diesel vehicles which is similar to Number One Diesel Fuel.

MAG 3. Paving and/or Dust Proofing of Unpaved Roads, Alleys and Parking Lots

A number of cities and towns referenced their commitments for RACM numbers ten and eleven. The City of Avondale will pave five projects in FY 1992-1993. Fountain Hills indicated that 14.6 miles of roadway will be paved in 1992. The City of Litchfield Park will implement this measure during 1992-93. The City of Surprise indicated this is an ongoing measure. In addition, the Arizona Department of Transportation indicated that there are no unpaved roads, alleys, or parking lots within the agency's jurisdiction.

MAG 4. Paving and/or Dust Proofing Driveways, Curbing, and Frequent Sweeping

Periodic street sweeping is an ongoing public service provide by the MAG municipalities, Maricopa County, and the Arizona Department of Transportation. Many of the MAG member jurisdictions referenced their commitments for RACM numbers nine, ten, and eleven. Also, the City of Avondale plans to install improvements for three areas in Fiscal Year 91-92.

MAG 5. Vegetation and Windbreaks to Control Windblown Dust

On publicly owned lands such as parks and road medians, landscaping programs are already underway in numerous cities and towns. On privately owned lands, zoning regulations afford local governments some control over landscaping practices. Several MAG member jurisdictions referenced their commitments for RACM numbers eleven and fourteen. In addition, the City of Avondale committed to implement three landscaping projects by 1992. The City of Litchfield Park will implement this measure in 1992-93.

MAG 6. Restrictions on the Use of Blowers for Landscaping Maintenance (Areawide Strategy)

A few MAG member jurisdictions indicated that they will continue their ongoing efforts regarding this measure. The Town of Buckeye indicated that it will adopt an ordinance with police enforcement by October 1993. The City of Surprise will draft an ordinance to implement this measure. In addition, the City of Tempe will provide a bid option for future private maintenance contracts.

MAG 7. Watering, Vehicle and Street Washings at Construction Sites

Maricopa County develops and enforces regulations pertaining to dust control at construction sites. These regulations are complemented with local ordinances and enforcement by various cities and towns. In addition, the Arizona Department of Transportation complies with these regulations.
Many MAG member jurisdictions referenced their commitments to RACM numbers two and four. The Town of Buckeye indicated that an ordinance will be adopted by October 1993. The City of Litchfield Park will require contractors to implement this measure through the permitting process. The Town of Queen Creek will adopt measures to be implemented by July 1992. Also, the City of Surprise indicated that this is an ongoing measure within its jurisdiction.

MAG 8. Industrial/Point Source Controls (Areawide Strategy)

Maricopa County develops and enforces emission control regulations pertaining to industrial sources and construction sites. The County has an ongoing program for the review and adoption of these regulations. A number of MAG member jurisdictions referenced their commitments to RACM numbers two, four, and twenty-one. In addition, the Town of Queen Creek will adopt measures to be implemented by July 1992. Also, the Town of Buckeye and El Mirage will adopt ordinances by October 1993.

MAG 9. Windbreaks for Controlling Particulates from Agricultural Activities (Areawide Strategy)

Numerous cities and towns referenced their commitments to RACM number fifteen. Litchfield Park committed to implement this measure during 1992-93. Also, the acreage in agricultural land within a number of the MAG jurisdictions is limited and steadily declining due to development. The Town of Wickenburg indicated that no agricultural activities exist within the jurisdiction.

MAG 10. Design Specifications and Catalytic Controls for New or Remodeled Fireplaces and Wood Burning Stoves (Areawide Strategy)

A number of the MAG member municipalities referenced their commitments to RACM number eighteen.

MAG 11. Ordinances to Control the Use of Fireplaces and Wood Burning Stoves (Areawide Strategy)

A number of cities and towns referenced their commitments for RACM number sixteen.

MAG 12. Restrictions on Motorized Vehicles for Off-Road Use (Areawide Strategy)

A number of the MAG member jurisdictions indicated that pertinent commitments were listed under RACM number seven.

MAG 13. Requirements for Truck Covers (Areawide Strategy)

Numerous MAG member jurisdictions referenced their commitments for RACM number three. The Town of Fountain Hills indicated that it would be preparing a Town Code. The Town of Guadalupe is currently drafting a Storm Water Master Plan. In addition, the City of Surprise will draft a policy to implement this measure.

MAG 14. Maintaining Land After Zoning is Given but Not Developed

A number of cities and towns referenced their commitments for RACM numbers two and fourteen. The City of Avondale will develop an ordinance by January 1992. Buckeye and El Mirage will adopt local ordinances by October 1993. The City of Litchfield park indicated this is an ongoing measure for development and will be implemented for land owners in 1992. In addition, Carefree, Cave Creek, and Fountain Hills will add stipulations to zoning requests and grant rezoning on a conditional basis.

MAG 15. Moving the State Fair Dates to March 1 through October 1 and/or Moving the Location of the State Fair

This measure would move the State Fair session out of the prime inversion season and/or away from a location which is already subject to high pollutant levels. Many of the MAG member jurisdictions indicated support for this proposal. Actual implementation would require action from the Arizona Legislature.

ANALYSIS OF PLAN COMMITMENTS RECEIVED FROM THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY FOR FEASIBILITY STUDIES

The Arizona Department of Environmental Quality (ADEQ) acknowledges that:

- Vehicle tailpipe emissions constitute a major component of ambient PM-10 in the MAG planning area;
- ADEQ has primary jurisdiction over mobile sources of air pollution, per A.R.S. §49-402;
- A variety of control options may be available to reduce PM-10 emissions from vehicles; and
- Little information is available to determine which, if any, of these control options are reasonably available to reduce PM-10 emissions from vehicle tailpipes in the MAG planning area.

As a result, the ADEQ commits to implement the feasibility studies described below to establish which, if any, vehicle emission control strategies are reasonably available. In addition, the ADEQ commits to complete these studies by December 1992.

1. A study to examine possible changes to the vehicle emissions inspection programs authorized under A.R.S., Title 49, Chapter 3, Article 5 to increase the effectiveness of the program in reducing tailpipe emissions from both diesel and gasoline powered vehicles. This study will include a comparison of the effectiveness of increasing the stringency of the current emission standards for diesel vehicles using the test method required in A.R.S. §49-542.F. with the "snap acceleration test", as well as broader application of the "snap acceleration test".

2. A study to investigate the feasibility of:

   a) Mandatory use of reformulated diesel fuels as a particulate control strategy, including potential negative impacts related to other pollutants;

      Note: This measure is related to measure number 2 in the list of measures adopted by the MAG Regional Council for the MAG 1988 Particulate Plan for PM-10.

   b) Mandatory retrofit of heavy duty diesel vehicles with devices, such as particulate traps, known to reduce tailpipe emissions from diesel vehicles.

ANALYSIS OF PLAN COMMITMENTS RECEIVED BEYOND THE ADOPTED LIST OF MEASURES

Although these measures are already being implemented through the Federal Implementation Plan for Carbon Monoxide and the MAG 1987 Carbon Monoxide Plan, the Arizona Department of Transportation, Town of Carefree, Town of Cave Creek, Regional Public Transportation Authority, Town of Fountain Hills, Town of Queen Creek, and City of Surprise submitted renewed, and in some cases, new commitments to the measures described below. These measures are contained in Section II of the MAG 1988 list.

MAG 16. Vehicle Inspection Maintenance Program - 1987 Legislation Statewide (Areawide Strategy)

The City of Surprise indicated that it conducts a Vehicle Inspection Maintenance Program weekly on town vehicles.

MAG 18. Short-Range Transit Improvements (Areawide Strategy)

The City of Surprise has indicated it is implementing a Transportation System (Dial-a-Ride) to provide service to connecting transit systems.

MAG 19. Long-Range Transit Improvements (Areawide Strategy)

The Regional Public Transportation Authority, established in January 1986, has as its primary mission the planning of future rapid transit system. The RPTA planning effort is being conducted with extensive cooperation from local governments. The City of Surprise is implementing a Transportation System (Dial-A-Ride) to provide service to connecting transit systems.

MAG 20. Exclusive Bus Lanes on Arterials and Freeways as Appropriate (Areawide Strategy)

The City of Surprise has indicated that it will study this measure and implement as future growth may dictate.

MAG 22. Model Trip Reduction Ordinance - Employer Based Transportation Management (Areawide Strategy)

The City of Surprise has indicated that it will encourage the use of carpools and vanpools.

MAG 23. Voluntary No Drive Days Program (Areawide Strategy)

The City of Surprise has indicated that it will cooperate with other government entities for implementation of this measure during winter months.

MAG 24. Areawide Public Awareness Program (Areawide Strategy)

The Town of Cave Creek will make available to the public all information it receives concerning clean air and the promotion of alternative driving behavior. The City of Surprise indicated that it will cooperate with Maricopa County to improve local public awareness.

MAG 25. Park and Ride Lots (Areawide Strategy)

The City of Surprise will provide parking as available for persons utilizing carpool, vanpool or public transit facilities. In addition, the City will review park and ride availability in conjunction with development plans.

MAG 29. High Occupancy Vehicle Lanes on Freeways (Areawide Strategy)

The Arizona Department of Transportation, in cooperation with local jurisdictions, is responsible for constructing the planned MAG Freeway/Expressway System. ADOT has committed to the construction of an additional 22 miles of high occupancy vehicle lanes in freeway corridors by 1995. HOV lanes also will be considered for possible implementation for each new freeway/expressway corridor being studied in the MAG region.

MAG 30. High Occupancy Vehicle Lanes on Existing Arterials as Appropriate

The City of Surprise will provide high occupancy vehicle treatment on existing arterials where appropriate with bus lanes as growth and monies dictate.

MAG 31. High Occupancy Vehicle Ramps Which Bypass Freeway Ramp Metering Signals (Areawide Strategy)

The Arizona Department of Transportation, in cooperation with local jurisdictions, is responsible for constructing the planned MAG Freeway/Expressway System. This includes the construction of freeway entry ramps where bypasses could be built to enable high occupancy vehicles to access the freeway without being delayed by ramp metering controls. ADOT has committed to open high occupancy vehicle (HOV) lanes on Outer Loop elements now under construction, Outer Loop elements under design, and Hohokam/East Papago Extension facilities under design or construction. HOV lanes will be considered for possible implementation when constructing new freeway on-ramps of sufficient width to allow striping of HOV bypasses around ramp meters when warranted by traffic demands.

MAG 33. and 34. Freeway Surveillance, Ramp Metering, and Signage (Areawide Strategy)

The Arizona Department of Transportation will install loops and conduits in new freeways to facilitate the installation of ramp meters as traffic volumes warrant. In the existing Interstate 17/Interstate 10 corridor, funds have been programmed over the next five years for the installation of an extensive freeway management system. This system may include a control center, detector loops, call boxes, TV cameras, variable message signs, lane control signs, intersections controllers, and ramp meters.

MAG 35. Computerized Synchronization of Traffic Signals

Significant portions of the street system in the region currently benefit from signal synchronization. The Arizona Department of Transportation, as mandated by S.B. 1360, will pursue synchronization of traffic signals on state Highways in the nonattainment area in cooperation with local municipalities.

MAG 39. Intersection Improvements

The Arizona Department of Transportation indicated ongoing commitment to intersection improvement projects which facilitate turning movements, helping to maximize intersection capacities. These projects are included in the ADOT Five-Year Transportation Facilities Construction Program. The City of Surprise has initiated a program where traffic studies indicate where a future problem may exist; and indicated that new arterial designs are being initiated to accommodate better traffic control as new roads are build.

MAG 40. On-Street Parking Restrictions

A number of MAG member jurisdictions already have on-street parking restrictions or programs underway leading to restrictions. In general, parking on major arterials is extremely limited. The City of Surprise has indicated that more streets will be posted "No Parking" in the near future.

MAG 42. Increased Bicycle Use

Encouragement of bicycle use can consist of bicycle promotion, system planning, and educational activities, complementary to the provision of actual facilities. Carefree, Cave Creek, and Fountain Hills have continued their commitment to encourage bicycle travel. Cave Creek will also continue to provide bike lanes on roads improved in the future. The Town of Fountain Hills is in the process of developing a bicycle route plan. In addition, Queen Creek indicated that it will provide for bicycle use in all new developments through the Town's development regulation requirements.

MAG 43. Bicycle Travel and Support Facilities

The Town of Queen Creek will incorporate into the Town's development regulation requirements that will provide for bicycle use in all new developments.

MAG 44. Pedestrian Travel

Pedestrian travel in lieu of automobile use may be a feasible alternative for a variety of trip purposes in downtown areas and for certain short trips in suburban areas. Sidewalks, crosswalks, and other pedestrian amenities are typically included with most street construction in areas of at least moderate development density, and are often provided as a requirement in land development. The Town of Carefree has integrated encouragement of pedestrian travel into its General Plan and has committed to encourage pedestrian travel within its commercial core. Also, Fountain Hills will

integrate the encouragement of pedestrian travel into its General Plan. Cave Creek will continue to encourage pedestrian travel and provide residents with a safe way to travel by foot. The Town of Queen Creek will provide for bicycle use in all new developments by incorporating such requirements into the Town's development regulation. In addition, the RPTA and the City of Surprise have indicated that this is an ongoing measure.

MAG 45. Pedestrian and Bicycle Overpasses Where Safety Dictates

Grade separated pedestrian and bicycle crossings of heavily traveled, high speed arterials can improve safety and reduce delay for both motorists, bicyclists, and pedestrians alike. A number of pedestrian and bicycle overpasses already exist in the region. The Town of Queen Creek indicated that it will incorporate requirements into the Town's development regulation to provide for bicycle use in all new developments.

MAG 46. Conversion of Buses to Alternative Fuels and Use of Electric Buses for Shuttle Service (Areawide Strategy)

The 1987 Arizona air quality legislation requires that beginning in 1990, all buses purchased by a city, town, or county for operation in a nonattainment area must use clean burning fuels. This requirement does not require the retrofitting of buses purchased prior to January 1, 1990. The requirement will yield increasing emission reductions over time, as newly purchased buses gradually replace older buses, until the entire stock of buses has been replaced. The City of Surprise will implement such fuels and policies when available and feasible.

MAG 47. Use of Emissions Control Devices on Public Diesel Powered Vehicles (Areawide Strategy)

As described in the measure adopted by MAG and its member jurisdictions, public transit providers would be responsible for using emission control devices on publicly owned diesel powered vehicles when these devices become economically and technologically feasible.

MAG 48. Alternative Work Hours (Areawide Strategy)

The purpose of alternative work hours is to promote off-peak driving and to facilitate ridesharing and transit use. A related measure, Alternative Work Weeks, reduces the total number of work trips by condensing a given number of work hours into a smaller number of work days. The MAG Regional Rideshare staff will actively promote alternative work hours in presentations to private employers and local jurisdictions. The City of Surprise indicated that it will publicize and encourage employer cooperation regarding alternative work schedules and work weeks in town publications and newsletters.

MAG 50. Telecommunications - Telecommuting (Areawide Strategy)

With the availability of computerized telecommunications, increased potential exists to reduce commuting and travel for other purposes through the substitution of electronic communications. The RPTA indicated that this is an ongoing measure.

MAG 52. Evaluation of the Air Quality Impacts of New Development and Mitigation of Adverse Impacts (Areawide Strategy)

The 1987 air quality legislation requires every State agency, board, and commission to submit an air quality impact report to the Department of Environmental Quality on any State-funded transportation related project that it determines may impact air quality.

The City of Surprise has indicated that this measure will be implemented as soon as possible. The Town's Master Plan and Ordinance dictates protected quality building. In addition, no environmental, hazardous industry will be allowed to relocate or build within the Town limits.

MAG 54. Reduced Idling at Drive-Up Facilities

Vehicular emissions may be reduced by discouraging extensive idling for drive-up service by vehicles not equipped with catalytic converters. This could be accomplished, for example, by posting signs to discourage idling by older vehicles at drive-up facilities. The Town of Carefree has indicated it will promote a voluntary approach to this measure through the Town's newsletter and suggest signage to developers. Additionally, the Town of Cave Creek will suggest that applicable businesses place signage at the entrance of drive-up facilities to discourage extended periods of idling.

MAG 56. Enforcement of Traffic, Parking, and Air Pollution Regulations (Areawide Strategy)

The City of Surprise indicated that this is an ongoing measure.

ANALYSIS OF PLAN COMMITMENTS RECEIVED FOR THE CONTINGENCY PLAN

Section 172(c)(9) of the Clean Air Act requires that nonattainment area plans must provide for the implementation of specific measures to be undertaken if the area fails to make reasonable further progress, or to attain the air quality standard by the applicable attainment date. These contingency measures take effect without further action by the State or the EPA Administrator. The Contingency Plan for the MAG 1991 Particulate Plan for PM-10 consists of the five measures for which commitments are described below.

1. Divert Surface Transportation Program Funds to Encourage Alternative Modes of Travel

The Maricopa Association of Governments has committed to implement this measure should the contingency plan become effective.

2. Condition the UMTA Funded Purchase of New Diesel Buses to Require Particulate Traps

The Maricopa Association of Governments has committed to implement this measure should the contingency plan become effective.

3. Increase the First and Second Year Goals for the Maricopa County Travel Reduction Program

The Maricopa Association of Governments has committed to implement this measure should the contingency plan become effective. In December 1991, MAG prepared a report and recommendations which included this contingency measure. In November 1992, Maricopa County passed a Travel Reduction Ordinance with this contingency provision.

4. Include the Current Process for Annual Review of Progress Made to Reduce Air Pollution

The Maricopa Association of Governments has committed to implement this measure should the contingency plan become effective.

SUMMARY OF MEASURES FROM THE SUGGESTED LIST OF MEASURES WHICH DID NOT RECEIVE FIRM COMMITMENTS FOR IMPLEMENTATION

All of the measures from the Suggested List (see Chapter Six) have received some type of firm commitment, as defined by the Arizona Department of Environmental Quality, with the exception of the three measures which are described below.

REASONABLY AVAILABLE CONTROL MEASURES (RACM) AS IDENTIFIED BY THE ENVIRONMENTAL PROTECTION AGENCY

RACM 8. Improved Material Specification for and Reduction of Usage of Skid Control Sand or Salt

It has been determined that this measure is not reasonably available due to the warm climate of the MAG region. This measure is designed for use in areas with snow and ice.

RACM 15. Soil Conservation Requirements of the U.S. Food Security Act (Areawide Strategy)

The MAG Regional Council requested that this measure be implemented regionwide by the Arizona Department of Environmental Quality or Maricopa County. Maricopa County stated that this measure was not reasonably available and that the Arizona Department of Environmental Quality is coordinating this measure statewide. In addition, some of the jurisdictions indicated support for the MAG request.

AIR POLLUTION CONTROL MEASURES ADOPTED BY THE MAG REGIONAL COUNCIL FOR THE MAG 1988 PARTICULATE PLAN FOR PM-10

MAG 1. Vehicle Inspection Maintenance Program - 1987 Legislation for All Model Year Vehicles on a Statewide Basis (Areawide Strategy)

A number of MAG member jurisdictions indicated support for this measure and acknowledged State responsibility.

ADOPTION OF THE MAG 1991 PARTICULATE PLAN FOR PM-10

On October 28, 1991, the MAG Air Quality Policy Committee recommended that the following measures with firm commitments be included in the MAG 1991 Particulate Plan for PM-10:

- The Reasonably Available Control Measures (RACM) as identified by the Environmental Protection Agency, with the exception of Measure 15 entitled, Soil Conservation Requirements of the U.S. Food Security Act.

- Section I of the MAG 1988 Particulate Plan list, with the exception of Measure 1 entitled, Vehicle Inspection Maintenance Program - All Model Year Vehicles on a Statewide Basis.

- Measures which receive a firm commitment from the Arizona Department of Environmental Quality for feasibility studies. It is anticipated that these commitments will be forthcoming from the ADEQ.

- Contingency Plan Measures which were approved by the MAG Regional Council on September 25, 1991.

In making this recommendation, the Air Quality Policy Committee recognized that the combined impact of the committed measures will not result in attainment by the deadline of December 31, 1994, which is specified by the Clean Air Act. The Committee further acknowledged that it may be necessary to implement the Contingency Plan and other additional controls for which the feasibility has not yet been determined, such as particulate traps on all heavy duty diesel vehicles and strengthening the Vehicle Inspection Maintenance Program.

On October 30, 1991, the MAG Regional Council approved the recommendation from the MAG Air Quality Policy Committee. The complete list of particulate pollution control measures for which firm commitments were received is contained in Table 7-1, Table 7-2, Table 7-3, and Table 7-4. These lists also contain a brief description of each measure and the possible implementation responsibility.

TABLE 7-1

MEASURES FOR THE MAG 1991 PARTICULATE PLAN FOR PM-10 ADOPTED BY THE MAG REGIONAL COUNCIL

These measures may or may not be reasonably available to the implemented entities.

REASONABLY AVAILABLE CONTROL MEASURES (RACM) AS IDENTIFIED BY THE ENVIRONMENTAL PROTECTION AGENCY

AVAILABLE FUGITIVE DUST CONTROL MEASURES

*NEW 1. Paving, Vegetating, and Chemically Stabilizing Access Points (Areawide Strategy)

Pave, vegetate, or chemically stabilize access points where unpaved traffic surfaces adjoin paved roads.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

2. Dust Control Plans for Construction or Land Clearing (Areawide Strategy)

Require dust control plans for construction or land clearing projects.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns; Private Entities.

Note: This measure is related to measure number 7, 8, and 14 in the list of measures adopted by the MAG Regional Council in 1988.

3. Covering Haul Trucks (Areawide Strategy)

Require haul trucks to be covered.

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns.

Note: This measure is related to measure number 13 in the list of measures adopted by the MAG Regional Council in 1988.

NEW 4. Traffic Rerouting or Rapid Clean Up of Temporary Sources of Dust on Paved Roads (Areawide Strategy)

Provide for traffic rerouting or rapid clean up of temporary (and not readily preventable) sources of dust on paved roads (water erosion runoff, mud/dirt carryout areas, material spills, skid control sand). Delineate who is responsible for clean up.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

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*NEW indicates that the measure was not previously included in the list of measures adopted by the MAG Regional Council for the 1988 Particulate Plan.

NEW 5. Prohibition of Unpaved Haul Roads, and Parking or Staging Areas (Areawide Strategy)

Prohibit permanent unpaved haul roads, and parking or staging areas at commercial/municipal, or industrial facilities.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

NEW 6. Traffic Reduction Plans for Unpaved Roads (Areawide Strategy)

Develop traffic reduction plans for unpaved roads. Use of speed bumps, low speed limits, etc., to encourage the use of other (paved) roads.

Suggested Implementing Entity: Maricopa County; MAG Cities and Towns.

7. Limit Use of Recreational Vehicles on Open Land (Areawide Strategy)

Limit use of recreational vehicles on open land (e.g., confine operations to specific areas, require use permits, outright ban).

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns.

Note: This measure is related to measure number 12 in the list of measures adopted by the MAG Regional Council in 1988.

8. Improved Material Specification for and Reduction of Usage of Skid Control Sand or Salt

Require improved material specification for and reduction of usage of skid control sand or salt (e.g., require the use of coarse, nonfriable material during the snow and ice season).

Note: This measure is designed for winter conditions (snow and ice) and is not applicable to the Maricopa County area.

9. Curbing, Paving, or Stabilizing Shoulders of Paved Roads (Areawide Strategy)

Require curbing and pave or stabilize (chemically or with vegetation) shoulders of paved roads.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to measure number 4 in the list of measures adopted by the MAG Regional Council in 1988.

10. Paving or Chemically Stabilizing Unpaved Roads (Areawide Strategy)

Paved or chemically stabilize unpaved roads.

Suggested Implementing Entity: Maricopa County; MAG Cities and Towns.

Note: This measure is related to measure number 3 in the list of measures adopted by the MAG Regional Council in 1988.

11. Paving, Vegetating, or Chemically Stabilizing Unpaved Parking Areas (Areawide Strategy)

Pave, vegetate, or chemically stabilize unpaved parking areas.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to measure number 3 and 5 in the list of measures adopted by the MAG Regional Council in 1988.

NEW 12. Dust Control Measures for Material Storage Piles (Areawide Strategy)

Require dust control measures for material storage piles.

Suggested Implementing Entity: Maricopa County.

NEW 13. Storm Water Drainage to Prevent Water Erosion Onto Paved Roads (Areawide Strategy)

Provide for storm water drainage to prevent water erosion onto paved roads.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County (including the Maricopa County Flood Control District); MAG Cities and Towns.

NEW 14. Revegetation, Chemical Stabilization, or Other Abatement of Wind Erodible Soil (Areawide Strategy)

Require revegetation, chemical stabilization or other abatement of wind erodible soil, including lands subjected to water, mining, abandoned farms, and abandoned construction sites.

Suggested Implementing Entity: Arizona Department of Environmental Quality (by regulation); Maricopa County; MAG Cities and Towns.

Note: While this is predominately a new measure, it is somewhat related to measure number 5 in the list of measures adopted by the MAG Regional Council in 1988.

AVAILABLE RESIDENTIAL WOOD COMBUSTION CONTROL MEASURES

*16. Episode Curtailment Program for Residential Wood Combustion (Areawide Strategy)

Establish an episode curtailment program, including: a curtailment plan; a communication strategy to implement the plan; a surveillance plan (e.g., "windshield" survey, opacity trigger); and enforcement provisions including procedures, penalties, and exemptions). A voluntary program will be deemed reasonable if the area demonstrates attainment.

Suggested Implementing Entity: Arizona Legislature; Maricopa County (possibly through a countywide ordinance and a communication strategy in conjunction with the Clean Air Force Campaign/Voluntary No Drive Program).

Note: This measure is related to measure number 11 in the list of measures adopted by the MAG Regional Council in 1988.

NEW 17. Public Information Program on Wood Stoves and Wood Heat (Areawide Strategy)

Establish a public information program to inform and educate citizens about stove sizing, installation, proper operation and maintenance, general health risks of wood smoke, new technology stoves, and alternatives to wood heating.

Suggested Implementing Entity: Arizona Department of Environmental Quality; Arizona Department of Commerce - Energy Office; Maricopa County.

Note: While this is predominantly a new measure, it is related to measure number 11 in the list of measures adopted by the MAG Regional Council in 1988.

NEW, IN PART 18. Improved Performance of Woodburning Devices (Areawide Strategy)

Encourage improved performance of woodburning devices by:

NEW a. Establishing a program to identify, through opacity observation, deficiencies in stove operation and maintenance. Under such a program, advice and assistance should be provided to the identified households to help reduce visible emissions from their devices.

NEW b. Providing voluntary dryness certification programs for dealers and/or making free or inexpensive wood moisture checks available to burners.

c. Evaluating and encouraging, as appropriate, the accelerated changeover of existing devices to new source performance standards or other new technology stoves (e.g., hybrid designs, pellet stoves) by such approaches as subsidized stove purchases, tax credits or other incentives.

*Note: Measure 15 entitled, Soil Conservation Requirements of the U.S. Food Security Act did not receive firm commitments and was not included in the Adopted Plan.

Note: This portion of the measure is related to measure number 10 in the list of control measures adopted by the MAG Regional Council in 1988.

Suggested Implementing Entity: Arizona Department of Environmental Quality; Arizona Department of Commerce - Energy Office; Maricopa County.

NEW 19. Inducements to Reduce the Number of Stoves and Fireplaces (Areawide Strategy)

Provide inducements that would lead to reductions in the stove and fireplace population (or use) by:

NEW a. Slowing the growth of woodburning devices in new housing units by taxes, installation permit fees, or other disincentives.

NEW b. Encouraging a reduction in the number of woodburning devices (i.e., removing or disabling the devices) through tax credits or other incentives.

NEW c. Discouraging the resale of used stoves through taxes, fees, or other disincentives.

NEW d. Discouraging the availability of free (or very inexpensive) firewood by increasing cutting fees or limiting the cutting season.

Suggested Implementing Entity: Arizona Legislature; Maricopa County.

PRESCRIBED BURNING CONTROL MEASURES

NEW 20. Establishment of a Smoke Management Program (Areawide Strategy)

Establish a Smoke Management Program applicable to all open burning of vegetative matter. This includes both planned ignition and prescribed natural fire. A Smoke Management Program which constitutes RACM should consist of at least the following components:

NEW a. Smoke Dispersion Evaluation - As a minimum, the program should use National Weather Service forecasts or other meteorological analyses to determine when meteorological conditions are favorable or unfavorable for dispersion and transport of smoke (i.e., "burn days," "no burn days").

NEW b. Burn Planning, Authorization, and Administration - The Smoke Management Program should provide a process (e.g., telephone call-in) for receiving burn requests, evaluating requests and granting approval for burns. Approval of a burn should be based on an evaluation of the airshed's capacity/capability to disperse emissions on allowable burn days so that the cumulative emissions from all burns and other sources in the airshed will not cause or contribute to exceedances of the PM-10 National Ambient Air Quality Standard. The approval to burn on a burn day should be equitably divided among all categories of burners requesting approval to burn while accommodating the "incentives" specified elsewhere in this policy.

NEW c. Requirements for Ensuring Burner Qualifications - Voluntary training in smoke management techniques should be reasonably available for all burners. The program should include incentives for burners who complete the voluntary training (e.g., priority for approval to burn on "burn days").

NEW d. Public Education and Awareness - Information programs on the nature of and reasons for smoke management should be periodically presented to the public (e.g., public service announcements, newspaper articles).

NEW e. Surveillance and Enforcement - The Smoke Management Program should rely on routine PM-10 monitoring, and/or modeling supplemented by periodic visual assessments of the effectiveness of the dispersion evaluation program. The existing PM-10 monitoring network should be evaluated for its ability to provide information on the effectiveness of RACM as applied to burning conducted in and near the nonattainment area. The network should be modified as appropriate. The program should also provide a process for documenting and following up on public complaints and should provide for and levy fines against burners who violate any of its mandatory requirements.

NEW f. Emission Inventories and Emission Reduction Efforts - States should develop and maintain an emissions inventory for prescribed burning and all burns should be categorized as to their purpose. Documentation of the size, date, purpose, and emission reduction measures used should be submitted following each large burn. Emission reduction techniques (e.g., mass ignition, rapid mop-up) should be encouraged and incentives (e.g., priority for approval to burn on "burn days") should be offered for demonstrated emission reduction efforts, including the use of alternatives to burning, provided that such incentives can be utilized without compromising resource management objectives.

NEW g. State Oversight - The relationship of the State air pollution agency with other State agencies to which management of the Smoke Management Program may have been delegated will need to be determined on a State-by-State basis. Nevertheless, State rules and regulations should be enacted in such a manner that all provisions of the Smoke Management Program are enforceable by the State through its State Implementation Plan. Generally, memorandums of understanding should be utilized to clearly specify working relationships among agencies.

Suggested Implementing Entity: Arizona Department of Environmental Quality; Maricopa County.

RACT DETERMINATIONS FOR STATIONARY SOURCES

21. Application of Reasonably Available Control Technology to Existing Stationary Sources (Areawide Strategy)

Apply Reasonably Available Control Technology (RACT) to existing stationary sources in nonattainment areas. The RACT for a particular source has always been determined on a case-by-case basis considering the technological and economic feasibility of reducing emissions from that source (through process changes or add-on control technology). The following technological and economic parameters should be considered in determining RACT for a particular source:

a. Technological Feasibility - The technological feasibility of applying an emission reduction method to a particular source should consider the source process and operating procedures, raw materials, physical plant layout, and any other environmental impacts such as water pollution, waste disposal, and energy requirements. The process, operating procedures, and raw materials used by a source can affect the feasibility of implementing process changes that reduce emissions and the selection of add-on emission control equipment. The operation of and longevity of control equipment can be significantly influenced by the raw materials used and the process to which it is applied. The feasibility of modifying processes or applying control equipment is also influenced by the physical layout of the particular plant. The space available in which to implement such changes may limit the choices and will also affect the costs of control.

Reducing air emissions may not justify adversely affecting other resources by increasing pollution of bodies of water, creating additional solid waste disposal problems or creating excessive energy demands. (A PM-10 control technology may not be reasonable if these other environmental impacts cannot reasonably be mitigated.) For analytic purposes, a State may consider a PM-10 control measure technologically infeasible if, considering the availability (and cost) of mitigative adverse impacts of that control on other pollution media, the control would not, in the State's reasoned judgment, provide a net environmental benefit. In many instances, however, PM-10 control technologies have known energy penalties and adverse effects on other media, but such effects and the cost of their mitigation are also known and have been borne by owners of existing sources in numerous cases. Such well-established adverse effects and their costs are normal and assumed to be reasonable and should not, in most cases, justify nonuse of the PM-10 control technology. The costs of preventing adverse water, solid waste and energy impacts will also influence the economic feasibility of the PM-10 control technology.

Alternative approaches to reducing emissions of particulate matter including PM-10 are discussed in Control Techniques for Particulate Emissions from Stationary Sources - Volume I (EPA-450/3-81-005a) and Volume II (EPA-450/3-81-005b), September 1982. The design, operation and maintenance of general particulate matter control systems such as mechanical collectors, electrostatic precipitators, fabric filters, and wet scrubbers are discussed in Volume I. The collection

efficiency of each system is discussed as a function of particle size. Information is also presented regarding energy and environmental considerations and procedures for estimating costs of particulate matter control equipment. The emission characteristics and control technologies applicable to specific source categories are discussed in Volume II. Secondary environmental impacts are also discussed.

Additional sources of information on control technology are background information documents for new source performance standards and Identification, Assessment, and Control of Fugitive Particulate Emissions, EPA-600/8-86-023, August 1986.

b. Economic Feasibility

Economic feasibility considers the cost of reducing emissions and the difference in costs between the particular source and other similar sources that have implemented emission reductions. As discussed above, EPA presumes that it is reasonable for similar sources to bear similar costs of emission reduction. Economic feasibility rests very little on the ability of a particular source to "afford" to reduce emissions to the level of similar sources. Less efficient sources would be rewarded by having to bear lower emission reduction costs if affordability were given high consideration. Rather, economic feasibility for RACT purposes is largely determined by evidence that other sources in a source category have in fact applied the control technology in question.

The capital costs, annualized costs, and cost effectiveness of an emission reduction technology should be considered in determining its economic feasibility. The OAOPS Control Cost Manual, Fourth Edition, EPA-450/3-90-006, January 1990, describes procedures for determining these costs. The above costs should be determined for all technologically feasible emission reduction options.

States may give substantial weight to cost effectiveness in evaluating the economic feasibility of an emission reduction technology. The cost effectiveness of a technology is its annualized cost ($/year) divided by the amount of PM-10 emission reduction (i.e., tons/year) which yields a cost per amount of emission reduction ($/ton). Cost effectiveness provides a value for each emission reduction option that is comparable with other options and other facilities.

If a company contends that it cannot afford the technology that appears to be RACT for that source or group of sources, the claim should be supported with such information as the impact on:

1. Fixed and variable production costs ($/unit),
2. Product supply and demand elasticity,
3. Product prices (cost absorption vs. cost pass-through),
4. Expected costs incurred by competitors,
5. Company profits, and
6. Employment.

If a company contends that RACT is not affordable and would lead to closing the facility, the costs of closure should be considered. Closure may incur costs for demolition, relocation, severance pay, etc.

Suggested Implementing Entity: Arizona Department of Environmental Quality; Maricopa County.

Note: This measure is related to measure number 8 in the list of measures adopted by the MAG Regional Council in 1988.

TABLE 7-2

MEASURES FOR THE MAG 1991 PARTICULATE PLAN FOR PM-10 ADOPTED BY THE MAG REGIONAL COUNCIL

These measures may or may not be reasonably available to the implemented entities.

AIR POLLUTION CONTROL MEASURES ADOPTED BY THE MAG REGIONAL COUNCIL FOR THE MAG 1988 PARTICULATE PLAN FOR PM-10

I. MEASURES DESIGNED TO SPECIFICALLY REDUCE PARTICULATES (PM-10)

PROHIBITION ON SALE OF NEW DIESEL VEHICLES, USE OF NUMBER ONE DIESEL FUEL, AND ADDITIONAL DIESEL CONTROLS

*2. Use of Number One Diesel Fuel or Other Clean Burning Diesel Fuel With Equal or Greater Impacts in Maricopa County (Areawide Strategy)

Require the use of Number One Diesel Fuel or other clean burning diesel fuel with equal or greater impacts for all diesel vehicles in the Maricopa County area.

Suggested Implementing Entity: Arizona Legislature; Arizona Department of Environmental Quality (program administration); MAG Cities, Towns and Maricopa County could support legislation.

PAVING OF STREETS, DRIVEWAYS, AND PARKING LOTS

3. Paving and/or Dust Proofing of Unpaved Roads, Alleys and Parking Lots

Pave and/or dust proof unpaved roads, alleys, and parking lots in Maricopa County.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 10 and 11 on the EPA list.

*Note: Measure 1 entitled, Vehicle Inspection Maintenance Program - 1987 Legislation for All Model Year Vehicles on a Statewide Basis did not receive from commitments and was not included in the Adopted Plan.

Note: The measures in Section II of this list entitled, Measures Adopted for the Carbon Monoxide and Ozone Plans Which Also Reduce Particulates, are being implemented as part of the MAG 1987 Carbon Monoxide Plan and Federal Implementation Plan for Carbon Monoxide.

4. Paving and/or Dust Proofing Driveways, Curbing, and Frequent Sweeping

Pave driveways, construct curbing, and sweep streets on a frequent basis in Maricopa County.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 9 on the EPA list.

5. Vegetation and Windbreaks to Control Windblown Dust

Plant vegetation and construct windbreaks to control windblown dust in Maricopa County.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 11 and somewhat related to measure number 14 on the EPA list.

6. Restrictions on the Use of Blowers for Landscaping Maintenance (Areawide Strategy)

Restrict or prohibit the use of blowers for landscaping maintenance in Maricopa County.

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns

CONSTRUCTION AND INDUSTRIAL CONTROLS

7. Watering, Vehicle and Street Washings at Construction Sites

Water the construction site area, wash construction vehicles, wash streets at and adjacent to construction sites in Maricopa County.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns; Private Entities.

Note: This measure is related to RACM measure number 2 on the EPA list.

8. Industrial/Point Source Controls (Areawide Strategy)

Implement additional industrial source controls and construction site controls.

Suggested Implementing Entity: Arizona Department of Transportation; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 2 and 21 on the EPA list.

AGRICULTURAL CONTROLS

9. Windbreaks for Controlling Particulates from Agricultural Activities

Construct windbreaks designed to control particulates generated from agricultural activities.

Suggested Implementing Entity: Maricopa County; MAG Cities and Towns; Private Entities.

Note: This measure is related to RACM measure number 15 on the EPA list.

FIREPLACES AND WOOD BURNING STOVES

10. Design Specifications and Catalytic Controls for New or Remodeled Fireplaces and Wood Burning Stoves (Areawide Strategy)

Implement design specifications and catalytic controls for new or remodeled fireplaces and wood burning stoves in Maricopa County.

Suggested Implementing Entity: Arizona Legislature and Maricopa County.

Note: This measure is related to RACM measure number 18 on the EPA list.

11. Ordinances to Control the Use of Fireplaces and Wood Burning Stoves (Areawide Strategy)

Adopt ordinances designed to control the use of fireplaces and wood burning stoves in Maricopa County.

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 16 and somewhat related to measure number 17 on the EPA list.

RESTRICTIONS ON OFF-ROAD VEHICLE USE

12. Restrictions on Motorized Vehicles for Off-Road Use (Areawide Strategy)

Restrict the use of motorized vehicles for off-road purposes in Maricopa County.

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 7 on the EPA list.

REQUIREMENTS FOR TRUCK COVERS

13. Requirements for Truck Covers (Areawide Strategy)

Require that trucks transporting materials such as sand, dirt, gravel, rock, other materials that contribute to particulates in the air be covered or treated in order to prevent particles from escaping into the air in Maricopa County.

Suggested Implementing Entity: Arizona Legislature; Maricopa County; MAG Cities and Towns.

Note: This measure is related to RACM measure number 3 on the EPA list.

AREAWIDE CHANGES IN LAND USE POLICY

14. Maintaining Land After Zoning is Given but Not Developed

Maintain land after zoning is given but the land is not developed.

Suggested Implementing Entity: MAG Cities and Towns; Maricopa County; and Arizona State Land Department.

Note: This measure is related to RACM measure number 2 on the EPA list.

15. Moving the State Fair Dates to March 1 through October 1 and/or Moving the Location of the State Fair

Move the State Fair dates to March 1 through October 1 and/or move the location of the State Fair.

Suggested Implementing Entity: Arizona Legislature; MAG Cities and Towns, and Maricopa County could support legislation.

TABLE 7-3

CONTINGENCY PLAN MEASURES FOR THE MAG 1991 PARTICULATE PLAN FOR PM-10 ADOPTED BY THE MAG REGIONAL COUNCIL

These measures may or may not be reasonably available to the implementing entities.

The 1990 Clean Air Act Amendments, Section 172(c)(9) Contingency Measures requires that nonattainment area plans must provide for the implementation of specific measures to be undertaken if the area fails to make reasonable further progress, or to attain the air quality standard by the applicable attainment date. These contingency measures take effect without further action by the State or the EPA Administrator.

- Divert Surface Transportation Program Funds to Encourage Alternative Modes of Travel - A one-time diversion of up to 10 percent of the MAG Federal Surface Transportation (STP) funds could be allocated from street improvement projects to programs which encourage alternate modes of travel such as vanpools, telecommuting, enhanced Transportation Management Associations programs, expansion of the Regional Rideshare Program, expansion of the Dash transit service, and provision of bicycle facilities. For example, a 10 percent allocation would represent approximately $1 million in addition to the MAG Congestion Mitigation and Air Quality Improvement Program funds designated for the MAG Regional Ridesharing Program, Transit, and Bikeway Projects.

  Suggested Implementing Entity: Maricopa Association of Governments.

- Condition the UMTA Funded Purchase of New Diesel Buses to Require Particulate Traps - Condition the Urban Mass Transportation Administration (UMTA) funds to require particulate traps in the purchase of new diesel buses. For Fiscal Year 1992-1993, it is estimated that approximately 93 new buses totalling an estimated federal share of $19.8 million will be purchased utilizing UMTA funds. The Maricopa Association of Governments is required by the federal government to approve the Short-Range Transit Plan which describes the purchase of these buses by the MAG member agencies.

  Suggested Implementing Entity: Maricopa Association of Governments.

- Increase the First and Second Year Goals for the Maricopa County Travel Reduction Program - Increase by 1 percent the first and second year goals for the Maricopa County Travel Reduction Program. The first year goal would be a 6 percent reduction in single occupant vehicle trips. The second year goal would be an additional 6 percent reduction in single occupant vehicle trips. Currently, both goals are 5 percent. Based upon State statutes, MAG is required to recommend future year goals, policies, standards, and criteria to the Maricopa County Board of Supervisors by December 31, 1991.

  Suggested Implementing Entity: Maricopa Association of Governments.

- Include the Current Process for Annual Review of Progress Made to Reduce Air Pollution - The MAG Air Quality Policy Committee would continue to review the progress made to reduce particulate pollution on an annual basis. If necessary, the Committee will consider strengthening existing measures and the use of additional measures.

TABLE 7-4

MEASURES WITH COMMITMENTS FROM THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY FOR FEASIBILITY STUDIES

1. Mandatory Use of Reformulated Diesel Fuels

   The feasibility study will include the mandatory use of reformulated diesel fuels. The study will also include the potential negative impacts related to other pollutants.

   Note: This measure is related to measure 2 in the MAG 1988 Plan list.

2. Mandatory Retrofit of Heavy Duty Diesel Vehicles With Devices Such as Particulate Traps

   The feasibility study will include devices, such as particulate traps, which are known to reduce tailpipe emissions from diesel vehicles.

3. Increasing the Effectiveness of the Vehicle Emissions Inspection Program to Reduce Emissions From Diesel and Gasoline Powered Vehicles.

   The feasibility study will include possible changes to increase the program effectiveness in reducing tailpipe emissions from both diesel and gasoline powered vehicles. The study will also include a comparison of the effectiveness of increasing the stringency of the current emissions standards for diesel vehicles using the test method required in A.R.S. §49-542.F. with the "snap acceleration test", as well as broader application of the "snap acceleration test".

*These studies will be completed by December 1992.

REASONABLE FURTHER PROGRESS

The EPA document, "Questions and Answers for PM-10", dated August 1991 contains the following in response to the question, "What is required to demonstrate reasonable further progress (RFP) in moderate areas?":

> ". . . For the initial PM-10 moderate nonattainment areas (due November 15, 1991) the emission reduction progress made between SIP submittal and the attainment date of December 31, 1994 (only 46 days beyond the November 15, 1994 milestone date) will satisfy the first quantitative milestone. However, the Administrator is required to determine within 6 months after the applicable attainment date whether a nonattainment area has attained the standards [section 179(c) and 188(b)(2)]. Therefore, consistent with the milestone requirement, within 90 days after the attainment date states must demonstrate that the SIP has been implemented and the area has attained the standards or, alternatively, qualifies for a 1 year extension of the attainment date [section 188(d)]. Additional guidance for the RFP demonstration for both moderate areas and serious areas will be provided later."

Additional guidance regarding the RFP demonstration has not been issued as of November 7, 1991. Therefore, this plan is not required to contain a reasonable further progress demonstration.

COMMITMENTS FOR IMPLEMENTATION

Resolutions from the respective implementing entities are discussed in Chapter Eight and the actual commitments are contained in Chapter Eleven. These resolutions contain specific commitments to implement the various control strategies as appropriate in the MAG 1991 Particulate Plan for PM-10.

The action taken by the MAG Regional Council to approve the Suggested Measures and the Adopted Plan Measures does not commit each jurisdiction to implement those measures. As indicated in the resolutions and commitments, each jurisdiction has determined which measures are reasonably available for implementation by that jurisdiction.

FINDING

As required in Section 189 of the 1990 Clean Air Act Amendments, the Adopted Plan, Chapter Seven, contains provisions to assure that Reasonably Available Control Measures for the control of PM-10 shall be implemented no later than December 10, 1993 with the exception of the following:

- RACM 8 Improved Material Specification for and Reduction of Usage of Skid Control Sand or Salt

  This measure is designed for winter conditions (snow and ice) and is not applicable to the Maricopa County area.

- RACM 15 Soil Conservation Requirements of the U.S. Food Security Act (Areawide Strategy)

  This measure did not receive any type of firm commitment for implementation. Maricopa County did, however, indicate that this measure was not reasonably available.

- MAG 1 Vehicle Inspection Maintenance Program - All Model Year Vehicles on a Statewide Basis

  This measure did not receive any type of firm commitment for implementation. The Arizona Department of Environmental Quality did, however, commit to conduct a feasibility study on increasing the effectiveness of the Vehicle Emissions Inspection Program in reducing tailpipe emissions.

After the MAG 1991 Particulate Plan for PM-10 and the corresponding commitments for implementation were submitted to EPA, the Arizona Legislature passed Senate Bill 1430 in 1992. Consequently, A.R.S. 49-402 E. requires the regional planning agency to consider a list of 24 air pollution control measures. Senate Bill 1430 is included in Appendix B, Exhibit 13.

All of these measures have been considered by MAG throughout the planning process. The majority of these measures are being implemented as part of the MAG 1987 Carbon Monoxide Plan, 1988 Carbon Monoxide Plan Addendum, MAG 1988 Particulate Plan and Federal Implementation Plan for Carbon Monoxide. The remainder of these measures are included in the Suggested List of Measures for the MAG 1991 PM-10 Plan which were considered for implementation by various entities. It is also important to note that the Adopted 1991 PM-10 Plan also contained firm commitments to implement many of the PM-10 specific measures.

The Maricopa Association of Governments is also preparing a new carbon monoxide plan and a new ozone plan for submittal to EPA by November 15, 1993. The list of measures contained in A.R.S. 49-402 E. is also being considered again through the regional planning process to develop these plans. While several of the measures on the list have already been implemented to varying degrees, the potential to strengthen these existing measures is being considered by the implementing entities.

CONFORMITY OF TRANSPORTATION ACTIVITIES WITH AIR QUALITY PLANS

In accordance with the 1990 Clean Air Act Amendments, conformity is designed 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 the air quality plans before approval action is taken by a Metropolitan Planning Organization, such as MAG.

Once the MAG 1991 Particulate Plan for PM-10 is approved by the Environmental Protection Agency, it will become the applicable particulate plan for conformity determinations. For the next Transportation Improvement Program (TIP), MAG will determine conformity for PM-10 against the new 1991 Particulate Plan. In order to perform the PM-10 conformity analysis, MAG will adhere to the Guidance for Determining Conformity of Transportation Plans, Programs, and Projects with Clean Air Act Implementation Plans During Phase I of the Interim Period (see Appendix B, Exhibit 8). This interim guidance was issued jointly by the U.S. Environmental Protection Agency and U.S. Department of Transportation.

In September 1991, the Maricopa Association of Governments completed a thorough conformity analysis on the MAG 1992-1996 Transportation Improvement Program and Regional Transportation Plan. The PM-10 conformity analysis and findings are included in Appendix B, Exhibit 9.

As mandated under the 1990 Amendments, the Environmental Protection Agency and Department of Transportation anticipate the publication of final conformity regulations in the Spring of 1992. The Maricopa Association of Governments will follow the final regulations for the PM-10 conformity analysis and findings when they are promulgated by EPA.

In addition, the MAG Regional Council on May 29, 1991, adopted a "Policy for Conformity Determinations by MAG". In accordance with the CAA Amendments and Federal Implementation Plan, this policy included approaches for preventing and reacting to nonconformance. The adopted MAG policy is described as follows:

Approaches to Prevent Nonconformance

- Identify Areas With High Levels of Traffic Congestion and High Pollution Concentration

  Identifying areas with high levels of traffic congestion and high pollution concentration in relationship to projects in the Transportation Improvement Program (TIP) and other transportation plans. This approach could enhance the decision making process for conformity determinations.

- Prioritize Transportation Projects

  Transportation projects could be prioritized in the TIP and other transportation plans based upon a variety of factors including air quality. The air quality factor could be based upon the levels of congestion relief within areas of high pollution concentration associated with the project. Transit and demand management projects could also be components of the air quality factor. The air quality factor could be weighted. The other factors could include: safety, system continuity, and relationship to the land use assumptions in the base case for the transportation model.

Approaches to React to Nonconformance

- Modify Projects, Eliminate Projects, or Add Control Measures

  Establishing policies for the Conformity Modifications specified in the Federal Implementation Plan (FIP) for Carbon Monoxide. These modifications are designed to bring a nonconforming transportation plan into conformity with the emissions ceiling in the air quality plan. The modifications include: elimination of the projects that cause the nonconformance; modifications to the projects which cause the nonconformance; modifications to other projects sufficient to offset emissions and concentration increases from the projects causing the nonconformance; or expeditious implementation of sufficient additional control measures to eliminate excess or reduce ambient concentrations to the levels in the applicable air quality plan.

Transportation projects located in areas of high congestion that contribute to nonconformance should be redesigned to incorporate features to encourage and support non-single occupant vehicle travel. These features may include facilities for pedestrians, bicyclists, carpooling, vanpooling, transit, etc. Transportation projects located in uncongested areas may be considered for reprogramming in order to enhance air quality. Reprogramming could include redesigning the project, changing the project location, adding transit and demand management provisions to the project, etc.

In order to react to nonconformance, the affected jurisdiction may also adopt transportation control measures not previously committed, or strengthen the commitment to transportation control measures already adopted.

This prioritization process of transportation projects, with air quality as a factor, is in the process of being developed. It is anticipated that the process or rating system will be available for use in the next TIP conformity analysis.

By November 15, 1992, the Maricopa Association of Governments submitted its conformity procedures to the Environmental Protection Agency. The procedures are designed to comply with the requirements in the Clean Air Act, EPA guidance, and conformity provisions of the Federal Implementation Plan for Carbon Monoxide. These procedures were submitted to EPA by the Arizona Department of Environmental Quality as a State Implementation Plan revision (see Appendix B, Exhibit 19 for the procedures).

APPENDIX P

EXAMPLE MOVES2010B INPUT FILES

In order to calculate the onroad source CO emissions, MOVES2010b was executed using local input data for Friday in December and the CO maintenance area.

The MOVES2010b RunSpec summary, RunSpec, and a portion of input data for the CO maintenance area for 2015 are provided in this appendix as an example.

MOVES2010b RunSpec Summary (December 2015)

Time Spans:
- Aggregate By: Hour
- Years: 2015
- Months: December
- Days: Weekdays
- Hours: Begin Hour: 00:00 - 00:59
  End Hour: 23:00 - 23:59

Geographic Bounds:
- COUNTY geography
- Selection: ARIZONA - Maricopa County

On Road Vehicle Equipment:
- Diesel Fuel - Combination Long-haul Truck
- Diesel Fuel - Combination Short-haul Truck
- Diesel Fuel - Intercity Bus
- Diesel Fuel - Light Commercial Truck
- Diesel Fuel - Motor Home
- Diesel Fuel - Motorcycle
- Diesel Fuel - Passenger Car
- Diesel Fuel - Passenger Truck
- Diesel Fuel - Refuse Truck
- Diesel Fuel - School Bus
- Diesel Fuel - Single Unit Long-haul Truck
- Diesel Fuel - Single Unit Short-haul Truck
- Diesel Fuel - Transit Bus
- Gasoline - Combination Long-haul Truck
- Gasoline - Combination Short-haul Truck
- Gasoline - Intercity Bus
- Gasoline - Light Commercial Truck
- Gasoline - Motor Home
- Gasoline - Motorcycle
- Gasoline - Passenger Car
- Gasoline - Passenger Truck
- Gasoline - Refuse Truck
- Gasoline - School Bus
- Gasoline - Single Unit Long-haul Truck
- Gasoline - Single Unit Short-haul Truck
- Gasoline - Transit Bus
- Compressed Natural Gas (CNG) - Combination Long-haul Truck
- Compressed Natural Gas (CNG) - Combination Short-haul Truck
- Compressed Natural Gas (CNG) - Intercity Bus
- Compressed Natural Gas (CNG) - Light Commercial Truck
- Compressed Natural Gas (CNG) - Motor Home
- Compressed Natural Gas (CNG) - Motorcycle
- Compressed Natural Gas (CNG) - Passenger Car
- Compressed Natural Gas (CNG) - Passenger Truck
- Compressed Natural Gas (CNG) - Refuse Truck
- Compressed Natural Gas (CNG) - School Bus
- Compressed Natural Gas (CNG) - Single Unit Long-haul Truck
- Compressed Natural Gas (CNG) - Single Unit Short-haul Truck
- Compressed Natural Gas (CNG) - Transit Bus

Road Types:
- Off-Network
- Rural Restricted Access
- Rural Unrestricted Access
- Urban Restricted Access
- Urban Unrestricted Access

Pollutants And Processes:
- Running Exhaust Carbon Monoxide (CO)
- Start Exhaust Carbon Monoxide (CO)
- Crankcase Running Exhaust Carbon Monoxide (CO)
- Crankcase Start Exhaust Carbon Monoxide (CO)
- Crankcase Extended Idle Exhaust Carbon Monoxide (CO)
- Extended Idle Exhaust Carbon Monoxide (CO)

General Output:
- Output Database Server Name: [using default]
- Output Database Name: conf_co_2015_september2013_2010b_out_v1

Mass Units: Grams
Energy Units: Joules
Distance Units: Miles
Time Aggregate Level: Month
Output Emissions Breakdown Selection:
- Fuel Type
- Emission Process
- Onroad
- Road Type
- Source Type
- MOVES Vehicle Type

Manage Input Data Sets:
- selection: / stageii_input /

MOVES2010b RunSpec (December 2015)

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	<modeldomain value="SINGLE"/>
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	</geographicselections>
	<timespan>
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sourcetypename="Passenger Truck"/>
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Unit Long-haul Truck"/>
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Home"/>
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sourcetypename="Combination Short-haul Truck"/>
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Exhaust"/>
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Running Exhaust"/>
			<pollutantprocessassociation pollutantkey="2" pollutantname="Carbon Monoxide (CO)" processkey="16" processname="Crankcase
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			<pollutantprocessassociation pollutantkey="2" pollutantname="Carbon Monoxide (CO)" processkey="17" processname="Crankcase
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MOVES2010b Input Data (December 2015)

[FuelFormulation]

Fuel FormulationID	Fuel SubtypeID	RVP	Sulfur Level	ETOH Volume	MTBE Volume	ETBE Volume	TAME Volume	Aromatic Content	Olefin Content	Benzene Content	e200	e300	VolToWt PercentOxy	BioDiesel EsterVolume	Cetane Index	PAH Content	T50	T90
11212	1213	8.65	16.88	10.4	0	0	0	19.4	4.0	0.3	51.4	90.1	3.894	0	0	0	192.87	298.54
31212	20	0.00	6.20	0	0	0	0	0	0	0	0	0	0.000	0	0	0	0.00	0.00
30	30	0.00	0.00	0	0	0	0	0	0	0	0	0	0.000	0	0	0	0.00	0.00

[FuelSupply]

countyID	fuelYearID	monthGroupID	fuelFormulationID	marketShare	marketShareCV
4013	2012	12	11212	1	0.5
4013	2012	12	31212	1	0.5
4013	2012	12	30	1	0.5

[HPMSvTypeYear]

HPMSVtypeID	yearID	VMTGrowthFactor	HPMSBaseYearVMT	baseYearOffNetVMT
10	2015	0	140,570,366	0
20	2015	0	17,268,750,243	0
30	2015	0	11,471,063,685	0
40	2015	0	35,513,963	0
50	2015	0	1,076,045,728	0
60	2015	0	705,463,391	0

[SourceTypeYear]

yearID	sourceTypeID	sourceTypePopulation
2015	11	100,246
2015	21	1,242,202
2015	31	875,258
2015	32	292,409
2015	41	780
2015	42	384
2015	43	5,242
2015	51	704
2015	52	63,181
2015	53	9,258
2015	54	14,921
2015	61	7,239
2015	62	9,550

[ZoneMonthHour]

monthID	zoneID	hourID	temperature	relHumidity
12	40130	1	41.7	56.7
12	40130	2	40.9	58.3
12	40130	3	39.9	59.0
12	40130	4	38.5	59.7
12	40130	5	37.9	60.7
12	40130	6	37.6	59.7
12	40130	7	37	60.7
12	40130	8	36.6	60.3
12	40130	9	41.3	53.7
12	40130	10	47.3	46.7
12	40130	11	53.2	40.0
12	40130	12	58	35.0
12	40130	13	61.8	33.3
12	40130	14	64.8	32.3
12	40130	15	66.6	31.3
12	40130	16	66.7	30.7
12	40130	17	65.1	32.0
12	40130	18	59.3	35.7
12	40130	19	55.2	40.3
12	40130	20	51.9	44.0
12	40130	21	49.5	46.7
12	40130	22	48.6	50.0
12	40130	23	47.7	52.3
12	40130	24	46.2	54.7

[SourceTypeAgeDistribution]

		AgeFraction												
YearID	AgeID	11	21	31	32	41	42	43	51	52	53	54	61	62
2015	0	0.0462	0.0558	0.0628	0.0665	0.0583	0.0583	0.0994	0.0994	0.0910	0.1004	0.0995	0.0995	0.0994
2015	1	0.0684	0.0667	0.0535	0.0571	0.0630	0.0630	0.0921	0.0921	0.0820	0.0920	0.0922	0.0922	0.0921
2015	2	0.0504	0.0545	0.0404	0.0417	0.0427	0.0427	0.0545	0.0545	0.0508	0.0544	0.0546	0.0545	0.0545
2015	3	0.0344	0.0491	0.0276	0.0277	0.0167	0.0167	0.0284	0.0284	0.0282	0.0284	0.0284	0.0284	0.0284
2015	4	0.0763	0.0400	0.0217	0.0228	0.0274	0.0274	0.0349	0.0349	0.0312	0.0346	0.0349	0.0349	0.0349
2015	5	0.0773	0.0622	0.0532	0.0551	0.0585	0.0585	0.0753	0.0753	0.0692	0.0749	0.0754	0.0754	0.0753
2015	6	0.0895	0.0739	0.0714	0.0763	0.1276	0.1276	0.1276	0.1276	0.1118	0.1263	0.1277	0.1277	0.1276
2015	7	0.0876	0.0725	0.0765	0.0811	0.1177	0.1177	0.1305	0.1305	0.1151	0.1290	0.1306	0.1306	0.1305
2015	8	0.0721	0.0693	0.0644	0.0650	0.0805	0.0805	0.0725	0.0725	0.0700	0.0720	0.0726	0.0726	0.0725
2015	9	0.0529	0.0625	0.0653	0.0627	0.0525	0.0525	0.0368	0.0368	0.0444	0.0368	0.0368	0.0368	0.0368
2015	10	0.0603	0.0573	0.0554	0.0525	0.0390	0.0390	0.0237	0.0237	0.0322	0.0238	0.0237	0.0237	0.0237
2015	11	0.0484	0.0527	0.0498	0.0469	0.0300	0.0300	0.0174	0.0174	0.0260	0.0175	0.0174	0.0174	0.0174
2015	12	0.0416	0.0475	0.0555	0.0525	0.0403	0.0403	0.0224	0.0224	0.0312	0.0225	0.0224	0.0224	0.0224
2015	13	0.0346	0.0436	0.0486	0.0491	0.0503	0.0503	0.0560	0.0560	0.0536	0.0554	0.0561	0.0560	0.0560
2015	14	0.0286	0.0358	0.0371	0.0367	0.0464	0.0464	0.0329	0.0329	0.0338	0.0326	0.0329	0.0329	0.0329
2015	15	0.0204	0.0275	0.0298	0.0289	0.0254	0.0254	0.0200	0.0200	0.0225	0.0199	0.0200	0.0200	0.0200
2015	16	0.0159	0.0237	0.0308	0.0296	0.0245	0.0245	0.0176	0.0176	0.0211	0.0176	0.0176	0.0176	0.0176
2015	17	0.0151	0.0170	0.0215	0.0205	0.0204	0.0204	0.0103	0.0103	0.0133	0.0103	0.0103	0.0103	0.0103
2015	18	0.0122	0.0156	0.0212	0.0202	0.0207	0.0207	0.0102	0.0102	0.0131	0.0102	0.0102	0.0102	0.0102
2015	19	0.0093	0.0115	0.0186	0.0175	0.0122	0.0122	0.0065	0.0065	0.0097	0.0066	0.0065	0.0065	0.0065
2015	20	0.0089	0.0088	0.0123	0.0116	0.0077	0.0077	0.0043	0.0044	0.0066	0.0048	0.0042	0.0044	0.0044
2015	21	0.0063	0.0067	0.0085	0.0080	0.0062	0.0062	0.0034	0.0034	0.0048	0.0037	0.0032	0.0033	0.0034
2015	22	0.0046	0.0058	0.0074	0.0071	0.0051	0.0051	0.0034	0.0035	0.0047	0.0040	0.0031	0.0035	0.0035
2015	23	0.0044	0.0046	0.0065	0.0063	0.0069	0.0069	0.0034	0.0035	0.0044	0.0039	0.0033	0.0034	0.0035
2015	24	0.0043	0.0037	0.0068	0.0064	0.0050	0.0050	0.0027	0.0027	0.0039	0.0030	0.0025	0.0027	0.0027
2015	25	0.0041	0.0029	0.0052	0.0049	0.0039	0.0039	0.0022	0.0022	0.0031	0.0023	0.0021	0.0022	0.0022
2015	26	0.0048	0.0026	0.0035	0.0033	0.0029	0.0029	0.0015	0.0015	0.0020	0.0015	0.0015	0.0014	0.0015
2015	27	0.0066	0.0020	0.0046	0.0043	0.0021	0.0021	0.0015	0.0015	0.0023	0.0015	0.0015	0.0014	0.0015
2015	28	0.0061	0.0017	0.0034	0.0032	0.0014	0.0014	0.0010	0.0010	0.0017	0.0010	0.0010	0.0010	0.0010
2015	29	0.0043	0.0013	0.0024	0.0023	0.0010	0.0010	0.0007	0.0007	0.0012	0.0008	0.0007	0.0007	0.0007
2015	30	0.0043	0.0212	0.0342	0.0320	0.0037	0.0037	0.0067	0.0066	0.0151	0.0081	0.0066	0.0063	0.0065

[IMCoverage]

polProcessID	stateID	countyID	yearID	sourceTypeID	fuelTypeID	IMProgramID	begModelYearID	endModelYearID	inspectFreq	testStandardsID	useIMyn	complianceFactor
201	4	4013	2015	21	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2015	21	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2015	21	1	10	1996	2009	2	51	N	95.8845
201	4	4013	2015	31	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2015	31	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2015	31	1	10	1996	2009	2	51	N	95.8845
201	4	4013	2015	32	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2015	32	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2015	32	1	10	1996	2009	2	51	N	95.8845
201	4	4013	2015	52	1	3	1967	2009	1	13	N	95.8845
202	4	4013	2015	21	1	3	1967	1980	1	13	N	95.8845
202	4	4013	2015	21	1	6	1981	1995	2	33	N	95.8845
202	4	4013	2015	21	1	10	1996	2009	2	51	N	95.8845
202	4	4013	2015	31	1	3	1967	1980	1	13	N	95.8845
202	4	4013	2015	31	1	6	1981	1995	2	33	N	95.8845
202	4	4013	2015	31	1	10	1996	2009	2	51	N	95.8845
202	4	4013	2015	32	1	3	1967	1980	1	13	N	95.8845
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202	4	4013	2015	32	1	10	1996	2009	2	51	N	95.8845
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201	4	4013	2015	21	1	103	1967	1980	1	13	Y	62.454
201	4	4013	2015	21	1	106	1981	1995	2	31	Y	69.4533
201	4	4013	2015	21	1	110	1996	2011	2	51	Y	90.7854
201	4	4013	2015	31	1	103	1967	1980	1	13	Y	62.454
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201	4	4013	2015	32	1	103	1967	1980	1	13	Y	62.454
201	4	4013	2015	32	1	106	1981	1995	2	31	Y	69.4533
201	4	4013	2015	32	1	110	1996	2011	2	51	Y	79.8911
201	4	4013	2015	41	1	103	1967	1980	1	13	Y	62.454
201	4	4013	2015	42	1	103	1967	1980	1	13	Y	62.454
201	4	4013	2015	43	1	103	1967	1980	1	13	Y	62.454
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202	4	4013	2015	31	1	103	1967	1980	1	13	Y	62.454
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202	4	4013	2015	31	1	110	1996	2011	2	51	Y	85.3383
202	4	4013	2015	32	1	103	1967	1980	1	13	Y	62.454
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202	4	4013	2015	41	1	103	1967	1980	1	13	Y	62.454
202	4	4013	2015	42	1	103	1967	1980	1	13	Y	62.454
202	4	4013	2015	43	1	103	1967	1980	1	13	Y	62.454
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202	4	4013	2015	61	1	103	1967	1980	1	13	Y	62.454
202	4	4013	2015	62	1	103	1967	1980	1	13	Y	62.454
201	4	4013	2015	41	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	42	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	43	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	51	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	52	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	53	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	54	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	61	1	104	1981	2011	2	13	Y	94.4565
201	4	4013	2015	62	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	41	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	42	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	43	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	51	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	52	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	53	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	54	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	61	1	104	1981	2011	2	13	Y	94.4565
202	4	4013	2015	62	1	104	1981	2011	2	13	Y	94.4565

[RoadType]

roadTypeID	rampFraction
2	0.089767
4	0.135672

[RoadTypeDistribution]

sourceTypeID	roadTypeID	roadTypeVMTFraction
11	1	0
11	2	0.012795
11	3	0.037591
11	4	0.402340
11	5	0.547274
21	1	0
21	2	0.010226
21	3	0.032162
21	4	0.394117
21	5	0.563495
31	1	0
31	2	0.010637
31	3	0.034871
31	4	0.391706
31	5	0.562786
32	1	0
32	2	0.010637
32	3	0.034871
32	4	0.391706
32	5	0.562786
41	1	0
41	2	0.010903
41	3	0.035619
41	4	0.489505
41	5	0.463972
42	1	0
42	2	0.010903
42	3	0.035619
42	4	0.489505
42	5	0.463972
43	1	0
43	2	0.010903
43	3	0.035619
43	4	0.489505
43	5	0.463972
51	1	0
51	2	0.012514
51	3	0.022750
51	4	0.581602
51	5	0.383133
52	1	0
52	2	0.012514
52	3	0.022750
52	4	0.581602
52	5	0.383133
53	1	0
53	2	0.012514
53	3	0.022750
53	4	0.581602
53	5	0.383133
54	1	0
54	2	0.012514
54	3	0.022750
54	4	0.581602
54	5	0.383133
61	1	0
61	2	0.025336
61	3	0.019717
61	4	0.665408
61	5	0.289540
62	1	0
62	2	0.025336
62	3	0.019717
62	4	0.665408
62	5	0.289540

[MonthVMTFraction]

sourceTypeID	isLeapYear	monthID	monthVMTFraction
11	Y	12	0.083229
21	Y	12	0.083229
31	Y	12	0.083229
32	Y	12	0.083229
41	Y	12	0.083229
42	Y	12	0.083229
43	Y	12	0.083229
51	Y	12	0.083229
52	Y	12	0.083229
53	Y	12	0.083229
54	Y	12	0.083229
61	Y	12	0.083229
62	Y	12	0.083229

[DayVMTFraction]

			dayVMTFraction				
sourceTypeID	monthID	dayID	1	2	3	4	5
11	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
21	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
31	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
32	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
41	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
42	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
43	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
51	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
52	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
53	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
54	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
61	12	5	0.794502	0.806763	0.782095	0.806763	0.782095
62	12	5	0.794502	0.806763	0.782095	0.806763	0.782095

[HourVMTFraction]

				hourVMTFraction				
sourceTypeID	roadTypeID	dayID	hourID	1	2	3	4	5
11~62	1	5	1	0.0084	0.0106	0.0061	0.0106	0.0061
	1	5	2	0.0059	0.0078	0.0040	0.0078	0.0040
	1	5	3	0.0054	0.0073	0.0034	0.0073	0.0034
	1	5	4	0.0062	0.0083	0.0040	0.0083	0.0040
	1	5	5	0.0131	0.0165	0.0096	0.0165	0.0096
	1	5	6	0.0330	0.0401	0.0257	0.0401	0.0257
	1	5	7	0.0536	0.0581	0.0489	0.0581	0.0489
	1	5	8	0.0631	0.0565	0.0700	0.0565	0.0700
	1	5	9	0.0587	0.0543	0.0633	0.0543	0.0633
	1	5	10	0.0518	0.0532	0.0503	0.0532	0.0503
	1	5	11	0.0513	0.0527	0.0498	0.0527	0.0498
	1	5	12	0.0560	0.0569	0.0550	0.0569	0.0550
	1	5	13	0.0589	0.0594	0.0584	0.0594	0.0584
	1	5	14	0.0600	0.0618	0.0580	0.0618	0.0580
	1	5	15	0.0642	0.0644	0.0640	0.0644	0.0640
	1	5	16	0.0674	0.0620	0.0730	0.0620	0.0730
	1	5	17	0.0682	0.0583	0.0785	0.0583	0.0785
	1	5	18	0.0687	0.0568	0.0812	0.0568	0.0812
	1	5	19	0.0584	0.0531	0.0639	0.0531	0.0639
	1	5	20	0.0426	0.0422	0.0430	0.0422	0.0430
	1	5	21	0.0340	0.0341	0.0338	0.0341	0.0338
	1	5	22	0.0305	0.0334	0.0275	0.0334	0.0275
	1	5	23	0.0242	0.0303	0.0179	0.0303	0.0179
	1	5	24	0.0164	0.0218	0.0107	0.0218	0.0107

[AvgSpeedDistribution]

TypeID	sourceTypeID	hourDayID	avgSpeedFraction by avgSpeedBinID															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	11,22,31	15~65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0019	0.0000	0.0000	0.0391	0.1750	0.3287	0.4249	0.0305
		75~95	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0041	0.0000	0.0028	0.0699	0.2007	0.3033	0.3958	0.0234
		105~155	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0915	0.0034	0.9051	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0901	0.0009	0.9090	0.0000
		195~245	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0019	0.0000	0.0000	0.0391	0.1750	0.3287	0.4249	0.0305
	32	15~65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0013	0.0000	0.0000	0.0279	0.1492	0.3136	0.5080	0.0000
		75~95	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0027	0.0000	0.0014	0.0443	0.1539	0.2638	0.5339	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0775	0.0024	0.9202	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0745	0.0006	0.9248	0.0000
		195~245	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0013	0.0000	0.0000	0.0279	0.1492	0.3136	0.5080	0.0000
	41,42,43,51,52,53,54	15~65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0014	0.0000	0.0000	0.0214	0.1460	0.2979	0.5332	0.0000
		75~95	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0028	0.0000	0.0017	0.0376	0.1457	0.2372	0.5750	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0559	0.0025	0.9415	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0636	0.0006	0.9358	0.0000
		195~245	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0014	0.0000	0.0000	0.0214	0.1460	0.2979	0.5332	0.0000
	61,62	15~65	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0016	0.0000	0.0000	0.0071	0.1148	0.2832	0.5932	0.0000
		75~95	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0031	0.0000	0.0020	0.0256	0.1170	0.1901	0.6622	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0173	0.0027	0.9800	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0160	0.0006	0.9833	0.0000
		195~245	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0016	0.0000	0.0000	0.0071	0.1148	0.2832	0.5932	0.0000
3	11,22,31	15~65	0.0000	0.0000	0.0000	0.0450	0.0555	0.1159	0.3237	0.1964	0.2102	0.0158	0.0193	0.0182	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0000	0.0009	0.0826	0.0692	0.1047	0.2891	0.1787	0.2154	0.0352	0.0073	0.0170	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0274	0.0365	0.2824	0.1721	0.3948	0.0400	0.0221	0.0248	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0336	0.0394	0.3093	0.1811	0.3786	0.0076	0.0224	0.0279	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0000	0.0000	0.0450	0.0555	0.1159	0.3237	0.1964	0.2102	0.0158	0.0193	0.0182	0.0000	0.0000	0.0000	0.0000
	32	15~65	0.0000	0.0000	0.0000	0.0353	0.0368	0.1081	0.2732	0.2085	0.2458	0.0165	0.0338	0.0420	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0000	0.0006	0.0566	0.0452	0.0695	0.2485	0.1955	0.2702	0.0614	0.0135	0.0389	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0278	0.0387	0.2121	0.1660	0.4158	0.0498	0.0257	0.0641	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0377	0.0368	0.2440	0.1756	0.4090	0.0082	0.0255	0.0631	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0000	0.0000	0.0353	0.0368	0.1081	0.2732	0.2085	0.2458	0.0165	0.0338	0.0420	0.0000	0.0000	0.0000	0.0000
	41,42,43,51,52,53,54	15~65	0.0000	0.0000	0.0000	0.0341	0.0334	0.1000	0.2612	0.1807	0.2920	0.0245	0.0329	0.0412	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0000	0.0005	0.0564	0.0392	0.0615	0.2364	0.1760	0.3067	0.0641	0.0185	0.0407	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0260	0.0349	0.2014	0.1380	0.4373	0.0657	0.0363	0.0604	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0385	0.0336	0.2410	0.1506	0.4257	0.0192	0.0354	0.0560	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0000	0.0000	0.0341	0.0334	0.1000	0.2612	0.1807	0.2920	0.0245	0.0329	0.0412	0.0000	0.0000	0.0000	0.0000
	61,62	15~65	0.0000	0.0000	0.0000	0.0299	0.0228	0.0813	0.2310	0.1430	0.3558	0.0313	0.0359	0.0690	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0000	0.0003	0.0501	0.0306	0.0475	0.2036	0.1679	0.3326	0.0720	0.0294	0.0660	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0239	0.0291	0.1531	0.1007	0.4708	0.0807	0.0502	0.0914	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0000	0.0000	0.0000	0.0338	0.0244	0.1717	0.1025	0.5107	0.0159	0.0500	0.0911	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0000	0.0000	0.0299	0.0228	0.0813	0.2310	0.1430	0.3558	0.0313	0.0359	0.0690	0.0000	0.0000	0.0000	0.0000
4	11,22,31	15~65	0.0000	0.0015	0.0024	0.0027	0.0127	0.0513	0.0798	0.0962	0.1231	0.0732	0.1087	0.1141	0.1082	0.1099	0.1002	0.0160
		75~95	0.0000	0.0000	0.0022	0.0003	0.0279	0.0714	0.0932	0.1111	0.0862	0.0706	0.0863	0.0827	0.1151	0.1065	0.1284	0.0182
		105~155	0.0000	0.0000	0.0000	0.0000	0.0022	0.0000	0.0008	0.0017	0.0259	0.0697	0.1081	0.1773	0.1524	0.2039	0.2579	0.0001
		165~185	0.0000	0.0000	0.0000	0.0000	0.0007	0.0013	0.0000	0.0007	0.0037	0.0493	0.0887	0.1462	0.1924	0.2179	0.2990	0.0002
		195~245	0.0000	0.0015	0.0024	0.0027	0.0127	0.0513	0.0798	0.0962	0.1231	0.0732	0.1087	0.1141	0.1082	0.1099	0.1002	0.0160
	32	15~65	0.0000	0.0018	0.0034	0.0032	0.0131	0.0452	0.0787	0.0923	0.1174	0.0821	0.1226	0.1223	0.1228	0.1062	0.0889	0.0000
		75~95	0.0000	0.0000	0.0022	0.0002	0.0232	0.0555	0.0753	0.0891	0.0767	0.0666	0.0854	0.0903	0.1328	0.1438	0.1588	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0021	0.0000	0.0007	0.0015	0.0248	0.0689	0.1088	0.1731	0.1525	0.2019	0.2656	0.0001
		165~185	0.0000	0.0000	0.0000	0.0000	0.0008	0.0012	0.0000	0.0007	0.0032	0.0488	0.0919	0.1421	0.1933	0.2126	0.3052	0.0002
		195~245	0.0000	0.0018	0.0034	0.0032	0.0131	0.0452	0.0787	0.0923	0.1174	0.0821	0.1226	0.1223	0.1228	0.1062	0.0889	0.0000
	41,42,43,51,52,53,54	15~65	0.0000	0.0016	0.0040	0.0036	0.0148	0.0480	0.0843	0.1016	0.1216	0.0856	0.1274	0.1253	0.1149	0.0935	0.0739	0.0000
		75~95	0.0000	0.0000	0.0026	0.0002	0.0234	0.0578	0.0825	0.0964	0.0786	0.0681	0.0894	0.0926	0.1330	0.1381	0.1373	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0024	0.0000	0.0007	0.0019	0.0290	0.0765	0.1225	0.1866	0.1611	0.1903	0.2288	0.0001
		165~185	0.0000	0.0000	0.0000	0.0000	0.0008	0.0014	0.0000	0.0007	0.0035	0.0558	0.1019	0.1558	0.2101	0.2054	0.2642	0.0002
		195~245	0.0000	0.0016	0.0040	0.0036	0.0148	0.0480	0.0843	0.1016	0.1216	0.0856	0.1274	0.1253	0.1149	0.0935	0.0739	0.0000
	61,62	15~65	0.0000	0.0031	0.0032	0.0042	0.0177	0.0536	0.0934	0.1058	0.1125	0.0865	0.1257	0.1184	0.1127	0.0865	0.0767	0.0000
		75~95	0.0000	0.0000	0.0021	0.0002	0.0297	0.0696	0.0865	0.0998	0.0653	0.0641	0.0870	0.0913	0.1333	0.1361	0.1350	0.0000
		105~155	0.0000	0.0000	0.0000	0.0000	0.0024	0.0000	0.0007	0.0017	0.0320	0.0847	0.1339	0.1853	0.1535	0.1696	0.2362	0.0001
		165~185	0.0000	0.0000	0.0000	0.0000	0.0013	0.0011	0.0000	0.0009	0.0031	0.0641	0.1175	0.1625	0.1938	0.1877	0.2679	0.0001
		195~245	0.0000	0.0031	0.0032	0.0042	0.0177	0.0536	0.0934	0.1058	0.1125	0.0865	0.1257	0.1184	0.1127	0.0865	0.0767	0.0000
5	11,22,31	15~65	0.0000	0.0013	0.0115	0.0627	0.1772	0.3573	0.2333	0.1267	0.0287	0.0011	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0029	0.0164	0.0755	0.1771	0.3239	0.1938	0.1600	0.0487	0.0009	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0004	0.0020	0.0257	0.1158	0.2711	0.2375	0.2628	0.0818	0.0021	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0002	0.0019	0.0231	0.1179	0.2633	0.2368	0.2700	0.0838	0.0026	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0013	0.0115	0.0627	0.1772	0.3573	0.2333	0.1267	0.0287	0.0011	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
	32	15~65	0.0000	0.0007	0.0117	0.0548	0.1634	0.3470	0.2511	0.1383	0.0306	0.0019	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0017	0.0136	0.0571	0.1532	0.3023	0.2093	0.1964	0.0630	0.0016	0.0017	0.0000	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0002	0.0023	0.0201	0.1036	0.2581	0.2477	0.2798	0.0840	0.0028	0.0013	0.0002	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0001	0.0022	0.0200	0.1122	0.2510	0.2471	0.2814	0.0819	0.0035	0.0005	0.0002	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0007	0.0117	0.0548	0.1634	0.3470	0.2511	0.1383	0.0306	0.0019	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000

			avgSpeedFraction by avgSpeedBinID															
TypeID	sourceTypeID	hourDayID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	41,42,43,51,52,53,54	15~65	0.0000	0.0015	0.0110	0.0728	0.1891	0.3295	0.2460	0.1229	0.0251	0.0018	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0024	0.0127	0.0735	0.1785	0.2868	0.2162	0.1767	0.0502	0.0015	0.0015	0.0000	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0008	0.0031	0.0323	0.1319	0.2348	0.2589	0.2652	0.0691	0.0025	0.0012	0.0001	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0004	0.0033	0.0318	0.1402	0.2259	0.2619	0.2648	0.0681	0.0032	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0015	0.0110	0.0728	0.1891	0.3295	0.2460	0.1229	0.0251	0.0018	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000
	61,62	15~65	0.0000	0.0017	0.0106	0.0768	0.1994	0.3279	0.2387	0.1188	0.0237	0.0018	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000
		75~95	0.0000	0.0025	0.0123	0.0765	0.1907	0.2855	0.2126	0.1701	0.0465	0.0016	0.0016	0.0000	0.0000	0.0000	0.0000	0.0000
		105~155	0.0000	0.0010	0.0032	0.0366	0.1479	0.2312	0.2513	0.2602	0.0644	0.0026	0.0013	0.0003	0.0000	0.0000	0.0000	0.0000
		165~185	0.0000	0.0004	0.0034	0.0361	0.1559	0.2216	0.2553	0.2576	0.0655	0.0033	0.0005	0.0003	0.0000	0.0000	0.0000	0.0000
		195~245	0.0000	0.0017	0.0106	0.0768	0.1994	0.3279	0.2387	0.1188	0.0237	0.0018	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000

[AVFT]

			fuelEngFraction by fuelTypeID		
sourceTypeID	modelYearID	engTechID	1	2	3
42	1960	1	0.0000	1.0000	0. 0000
42	1961	1	0.0000	1.0000	0.0000
42	1962	1	0.0000	1.0000	0.0000
42	1963	1	0.0000	1.0000	0.0000
42	1964	1	0.0000	1.0000	0.0000
42	1965	1	0.0000	1.0000	0.0000
42	1966	1	0.0000	1.0000	0.0000
42	1967	1	0.0000	1.0000	0.0000
42	1968	1	0.0000	1.0000	0.0000
42	1969	1	0.0000	1.0000	0.0000
42	1970	1	0.0000	1.0000	0.0000
42	1971	1	0.0000	1.0000	0.0000
42	1972	1	0.0000	1.0000	0.0000
42	1973	1	0.0000	1.0000	0.0000
42	1974	1	0.0000	1.0000	0.0000
42	1975	1	0.0000	1.0000	0.0000
42	1976	1	0.0000	1.0000	0.0000
42	1977	1	0.0000	1.0000	0.0000
42	1978	1	0.0000	1.0000	0.0000
42	1979	1	0.0000	1.0000	0.0000
42	1980	1	0.0000	1.0000	0.0000
42	1981	1	0.0000	1.0000	0.0000
42	1982	1	0.0000	1.0000	0.0000
42	1983	1	0.0000	1.0000	0.0000
42	1984	1	0.0000	1.0000	0.0000
42	1985	1	0.0000	1.0000	0.0000
42	1986	1	0.0000	1.0000	0.0000
42	1987	1	0.0000	1.0000	0.0000
42	1988	1	0.0000	1.0000	0.0000
42	1989	1	0.0000	1.0000	0.0000
42	1990	1	0.0000	0.9930	0.0070
42	1991	1	0.0000	0.9820	0.0180
42	1992	1	0.0100	0.9440	0.0460
42	1993	1	0.0100	0.9140	0.0760
42	1994	1	0.0100	0.9050	0.0850
42	1995	1	0.0100	0.8370	0.1530
42	1996	1	0.0100	0.8920	0.0980
42	1997	1	0.0000	1.0000	0.0000
42	1998	1	0.0000	0.0000	1.0000
42	1999	1	0.0000	0.0000	1.0000
42	2000	1	0.0000	0.0000	1.0000
42	2001	1	0.0000	0.0000	1.0000
42	2002	1	0.0000	0.0000	1.0000
42	2003	1	0.0000	0.0000	1.0000
42	2004	1	0.0000	0.3881	0.6119
42	2005	1	0.0000	1.0000	0.0000
42	2006	1	0.0513	0.1538	0.7949
42	2007	1	0.2161	0.7839	0.0000
42	2008	1	0.0814	0.3256	0.5930
42	2009	1	0.1951	0.1220	0.6829
42	2010	1	0.0000	1.0000	0.0000
42	2011	1	0.0488	0.4146	0.5366
42	2012	1	0.0000	0.0000	1.0000
42	2013	1	0.0000	1.0000	0.0000

42	2014	1	0.0000	1.0000	0.0000
42	2015	1	0.0000	1.0000	0.0000
42	2016	1	0.0000	1.0000	0.0000
42	2017	1	0.0000	1.0000	0.0000
42	2018	1	0.0000	1.0000	0.0000
42	2019	1	0.0000	1.0000	0.0000
42	2020	1	0.0000	1.0000	0.0000
42	2021	1	0.0000	1.0000	0.0000
42	2022	1	0.0000	1.0000	0.0000
42	2023	1	0.0000	1.0000	0.0000
42	2024	1	0.0000	1.0000	0.0000
42	2025	1	0.0000	1.0000	0.0000
42	2026	1	0.0000	1.0000	0.0000
42	2027	1	0.0000	1.0000	0.0000
42	2028	1	0.0000	1.0000	0.0000
42	2029	1	0.0000	1.0000	0.0000
42	2030	1	0.0000	1.0000	0.0000
42	2031	1	0.0000	1.0000	0.0000
42	2032	1	0.0000	1.0000	0.0000
42	2033	1	0.0000	1.0000	0.0000
42	2034	1	0.0000	1.0000	0.0000
42	2035	1	0.0000	1.0000	0.0000
42	2036	1	0.0000	1.0000	0.0000
42	2037	1	0.0000	1.0000	0.0000
42	2038	1	0.0000	1.0000	0.0000
42	2039	1	0.0000	1.0000	0.0000
42	2040	1	0.0000	1.0000	0.0000
42	2041	1	0.0000	1.0000	0.0000
42	2042	1	0.0000	1.0000	0.0000
42	2043	1	0.0000	1.0000	0.0000
42	2044	1	0.0000	1.0000	0.0000
42	2045	1	0.0000	1.0000	0.0000
42	2046	1	0.0000	1.0000	0.0000
42	2047	1	0.0000	1.0000	0.0000
42	2048	1	0.0000	1.0000	0.0000
42	2049	1	0.0000	1.0000	0.0000
42	2050	1	0.0000	1.0000	0.0000

APPENDIX Q

TRIP REDUCTION PROGRAM SUMMARIES

TRIP REDUCTION PROGRAM

Annual Report

FY 2012

Maricopa County Air Quality Department

CLEAN AIR MAKE MORE

Maricopa County
Trip Reduction Program
Let's Clear The Air

Trip Reduction Program

July 1, 2011 – June 30, 2012

William Wiley, P.E.
Director, Air Quality Department

Prepared by
Maricopa County Trip Reduction Program Staff
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Trip Reduction Program
1001 North Central Ave. – Ste 550
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Maricopa County
Air Quality Department

SUBJECT: **Trip Reduction Program – Fiscal Year 2012 Annual Report**

DATES: **July 1, 2011 – June 30, 2012**
ADEQ Contract No. - EV11-00065

EXECUTIVE SUMMARY

During the Fiscal Year 2011-2012 (FY12) grant year, Maricopa County continued the Trip Reduction Program (TRP) and outreach efforts in support of the voluntary "Clean Air Campaign". Results were gathered from detailed statistical summary reports from each employee and student site participating in the program. During FY12, there were 3,013 sites in the TRP representing 1,170 companies. This year, the survey was administered to over 683,000 commuters. In addition, the TRP Task Force, along with the TRP staff, reviewed and approved 1,121 trip reduction plans. The following report tracks and analyzes the commuting habits of employees and students in Maricopa County.

The TRP is continually identifying new sites required to participate in the program. This on-going effort has resulted in 138 new employee and student sites incorporated into the TRP and completing their baseline year during FY12. While companies phased in and out of the TRP, the number of active sites remained approximately 3,000 throughout the year.

An aggregate analysis of the sites processed during FY12, for both employee and student participants, produced the following statistical results: 1) commuters in the TRP saved 14,667 tons of pollution by using an alternative mode of transportation; and 2) the TRP's e-survey was used by more companies than ever before, an increase of 18% year-over-year.

The TRP has two forms of its online e-survey. Employers can choose either the intranet or internet version. Overall, 288 companies had their employees/students use the e-survey this year. Fifteen companies programmed the intranet version onto their systems for their employees to use and 273 companies had their employees access the Maricopa County web-site for the internet form. Some of the larger companies used the intranet version, accounting for nearly one-fifth of all employees.

Companies that used the e-survey saved the TRP from providing over 288,000 paper forms; this was an increase of 19% more electronic surveys compared to last year. When TRP first started administering the e-survey, its goal was to have a 35% usage by all employees. This year, 46.1% of TRP employees used the e-survey to complete their survey. This was the first year that the e-survey was made available to students; which resulted in 21.5% of them using it.

MARICOPA COUNTY REGIONAL
TRIP REDUCTION PROGRAM
2012 Annual Report

INTRODUCTION

During Fiscal Year 2012, 3,018 employment sites were processed by the Trip Reduction Program (TRP). Of all the sites, 138 were baseline (first year sites). The TRP produces a detailed statistical summary report for each employment and student site. This year, the program administered the survey to over 683,000 employees and students. In addition, the TRP Task Force, along with the TRP staff, reviewed and approved 1,121 Trip Reduction plans. The following report tracks and analyzes the commuting habits of employees and students in Maricopa County.

The 1988 Omnibus Clean Air Legislation laid the foundation for the Maricopa County TRP. Employers with 100 or more employees were required to (1) reduce the single occupancy vehicle rate (SOV) by 5% annually, (2) name a transportation coordinator, (3) provide trip reduction information to all employees and/or students, (4) conduct an annual trip reduction survey and (5) submit an annual trip reduction plan.

The Trip Reduction Ordinance (TRO) adopted by the Board of Supervisors in September 1992 became effective January 1, 1993. This ordinance expanded the TRP by requiring employers with 75 to 99 employees to participate. The 1993 ordinance also established a SOV floor of 60%, and it improved SOV rate and SOV target calculations.

The TRO was amended May 26, 1994 with the following changes effective July 1, 1994; (1) employer SOV reduction goals were increased from 5% for the first five target years to 10% (employers in their sixth and subsequent target years have a SOV target of 5% annually), (2) employers with 50 to 74 employees were incorporated into the program and (3) employers were given credit towards SOV reduction goals for using Reduced Emission Vehicles (REV).

In May 1996, the TRO was amended and ten Equivalent Emission Reduction (EER) measures were implemented. The ordinance became effective in July 1997. The EER ordinance measures allow for credit to be given to companies toward meeting their trip reduction goals by implementing alternative air pollution reduction strategies. These strategies are listed on a separate form and submitted with their trip reduction surveys on an annual basis.

In the first program year of the TRP, approximately 500 employers and 800 employment sites were affected by the TRP. The implementation of the 1993 TRO added 300 employers and 700 sites to the program. With the implementation of the 1994 TRO, there are currently over 1,100 employers and 3,000 sites participating in the TRP.

PROGRAM OVERVIEW

The TRP's operational functions are divided into two sections: Operations/Research Data Analysis and Plan Review/Monitoring.

Operations / Research Data Analysis

Operations section's primary responsibilities are: 1) coordinating survey delivery and processing data; 2) monitoring new employers for incorporation into the TRP; 3) tracking effected employers to ensure that questionnaires and other requirements are submitted on schedule; and 4) developing policies and procedures.

The Research Data Analysis section is responsible for analyzing survey data and generating Summary Analysis reports for each employment site; analyzing and measuring the overall impact of the TRP on reducing single occupant commutes; and producing quarterly, annual and special reports for internal and external requests. In FY12, the Research/Data Analysis section sent out 2,511 summary analyses for employers and schools. In addition, they completed reports and supplied statistical data results for employers, researchers, city planners, news affiliates and individuals.

Plan Review/Monitoring

The Plan Review/Monitoring section reviews and evaluates all submitted TRP plans to determine if proposed strategies and/or incentives are adequate to achieve targeted SOV reductions. There were 1,121 TRP plans that were reviewed and approved by the Task Force and staff during FY12.

The Plan Review staff also monitors employers to ensure that trip reduction plans are implemented accordingly. Monitoring activities include on-site visits and phone calls to employers. This year there were 458 monitoring phone calls and 916 site visits completed. Employers not in compliance with TRP's policies and procedures can receive a Notice of Violation (NOV). During FY12, 68 NOV's were issued to employers who did not meet the statutory requirements. Of those referred to the TRP Task Force for enforcement, all were withdrawn following compliance by the respective employer.

Valley Metro/ RPTA

Both the Maricopa County TRP and the Valley Metro/Regional Public Transportation Authority (RPTA) provide staff to coordinate the benefits of both the TRP and the Clean Air Campaign. The RPTA is a sub-contracted organization that provides training, technical assistance and promotional material to all affected organizations. During the past year, 10 Introduction to the Trip Reduction Program training classes were conducted with a total of 184 attendees. In addition, 35 in-person Transportation Coordinator Association (TCA) meetings were held across the Valley; 421 people attended. Twelve TCA webinars were held with a total of 1,162 in attendance. Nearly 12,000 technical assistance and consultative service contacts were made to Valley organizations. This year, RPTA facilitated 57 presentations and events for TRP enployees, with approximately 3,798 employees in attendance. Now in its twenty-fifth year, awareness of the Clean Air Campaign continues to grow with the public.

ANNUAL REPORT METHODOLOGY

The Maricopa County Regional Trip Reduction Program's method for measuring employers' compliance with the program is based on an employer's current site year. This methodology allows for the aggregation of data by the current TRP program year. New employment sites are added on a continual basis. The total number of employees/students commuting patterns is measured to determine TRP's overall effectiveness on reducing single occupant vehicle trips and miles.

This year, aggregate data is only shown for the first program year (FY 1991) and the last five fiscal years. This is done to show how the TRP compares to the inaugural year and reflect the most recent trend of data. For purposes of maintaining consistency and tracking a company's historical data from one year to the next, data gathered for a company are based upon the company's anniversary date.

The regional calculation for the number of miles needed to generate one-pound of pollution, for an average vehicle, was 46.0 for the first and second quarters and 48.7 miles for third and fourth quarters of the fiscal year. This factor was used to calculate the amount of pollution saved annually in the program. The Maricopa Association of Governments (MAG) has provided the data, citing EPA's Mobile 6.2 as its source.

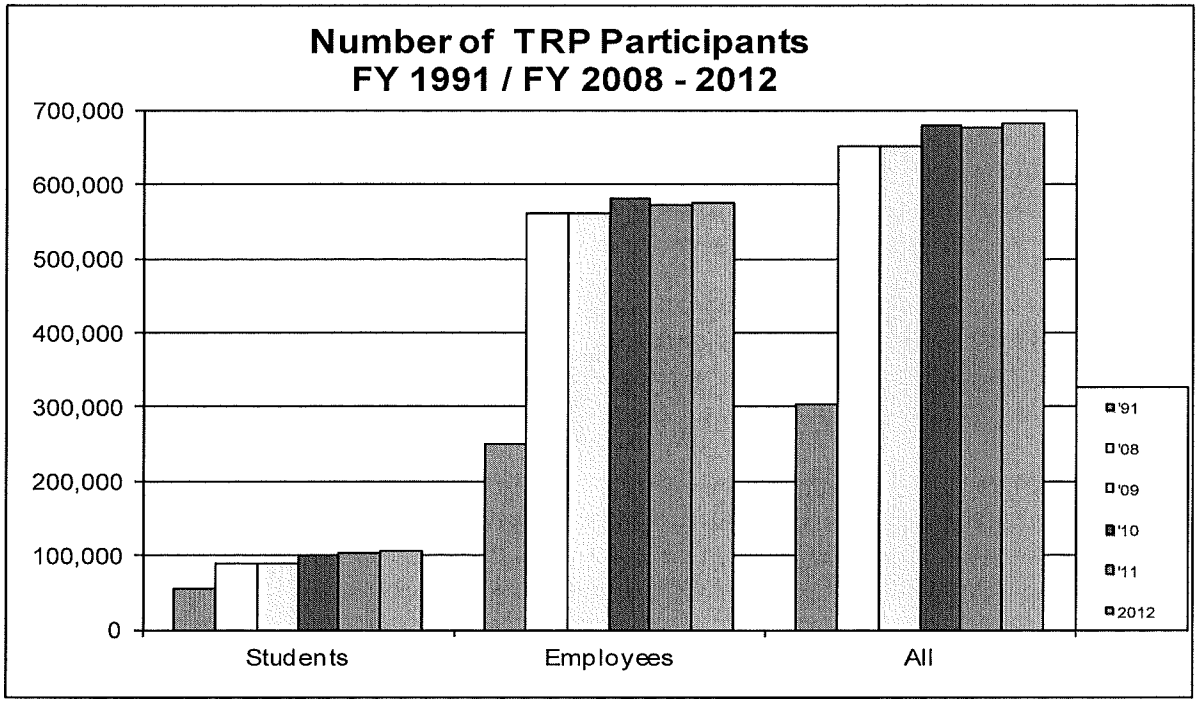
The staff members of the Maricopa County Trip Reduction Program and the Regional Public Transportation Authority (RPTA) work closely to the benefit of both the TRP and the Clean Air Campaign. The RPTA is sub-contracted by the County to provide training, technical support and promotional materials to all organizations effected by the TRP.

The FY12 Trip Reduction Program Final Report is highlighted with samples of program material, aggregate results of the annual survey, and the calculation methodology. Questions or comments should be addressed to the Maricopa County Air Quality Department, Trip Reduction Program, 1001 N. Central Ave. #550, Phoenix, AZ 85004.

NUMBER OF TRP PARTICIPANTS

The Maricopa County region affected by the Trip Reduction Program (TRP) has recorded continual growth since the inception of the program in 1989. TRP's overall participation has increased 124% since the first program year.

Based on current DES estimates for the Greater Phoenix-Glendale-Mesa metropolitan Area non-farm workforce, there are approximately 1,724,500 employees. TRP employees account for over 33.4% of those Maricopa County residents. In addition, 'Student' sites contribute another 106,081 participants to the overall population tracked by the TRP.



The number of all TRP participants has steadily increased each year of the program. When compared to DES estimates for non-farm workforce, TRP employees increased by 0.7%, while the DES workforce showed an increase of 2.7% from the previous year. The student population has remained fairly level over the previous four years, showing an increase for this year. Program participation shows an average annual rate increase of 1.2% since FY 2008.

Number of Participants

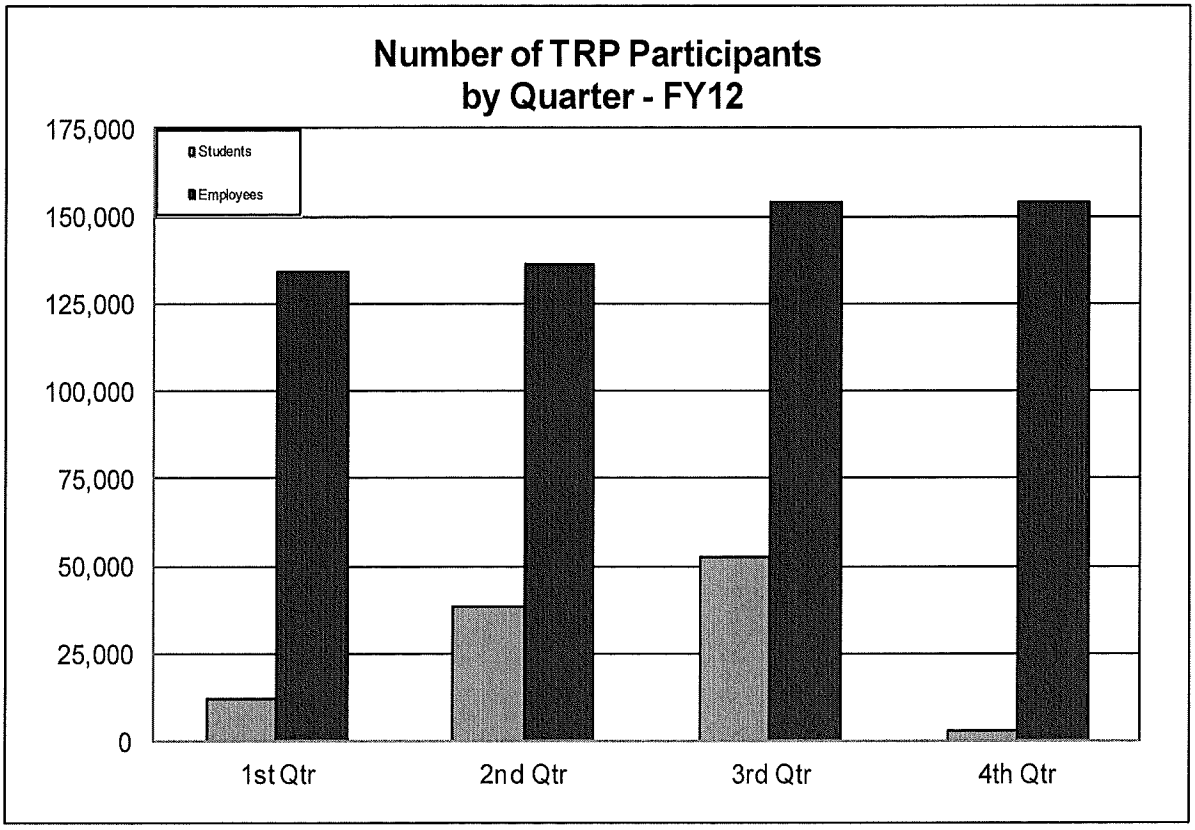
Site Type	FY 91	FY 08	FY 09	FY 10	FY 11	**FY 2012**
Students*	53,943	90,392	89,017	100,172	102,478	**106,081**
Employees	251,112	559,728	561,492	579,576	573,002	**577,432**
All	305,055	650,120	650,509	679,748	675,480	**683,513**

*Student population includes high school juniors and seniors, colleges, universities and vocational institutions.

TRP Participation by Quarter for FY 2012

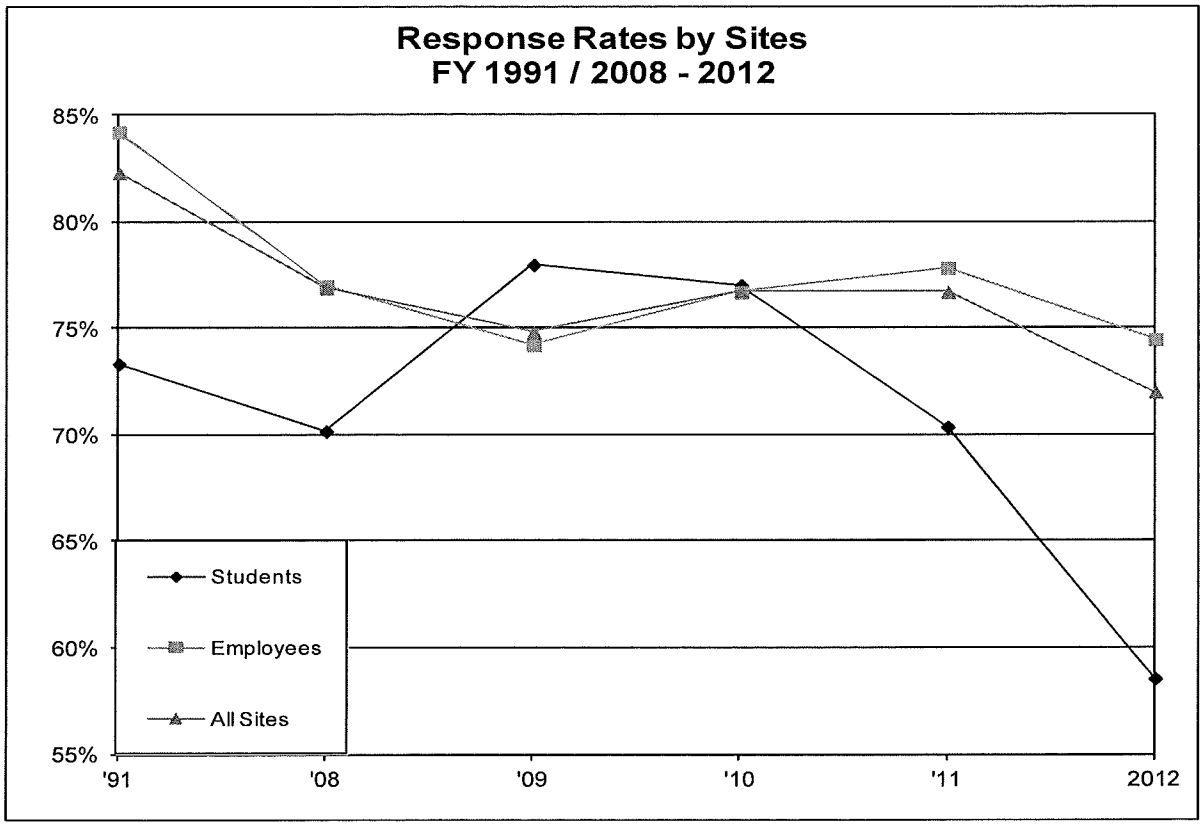
During the third quarter, the TRP surveyed many of the larger companies and high schools. Most secondary schools, which make up 70% of the student population, surveyed in the second and third quarters. This ensures that high schools will receive their survey results before the end of the school year and have time to implement their TRP plan. For employees, the least amount of surveys administered was during the first quarter, which is traditionally lower because employees are taking time off during the summer months.

Site Type	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
Students	12,343	38,311	52,656	2,771	106,081
Employees	133,768	135,910	153,750	154,004	577,432
All	146,111	174,221	206,406	156,775	683,513



TRP RESPONSE RATES

During FY12, 3,018 sites were analyzed. This included 2,889 'Employee' sites and 129 'Student' sites. The TRP questionnaire was administered to 683,513 employees and students this year with an overall response rate of 72.05%.



The response rate is calculated by dividing the number of questionnaires completed by the number of the employees at the site. If the response rate for an employer is less than the required 60%, a company is directed to resurvey that site. The TRP continues to achieve high response rates each year. Because of this, data collected by the TRP is very comprehensive, and is requested by numerous outside agencies and organizations for detailed analysis.

The response rate for 'All' site types decreased for this year. The student response rate was lower than the employee response rate, 58.56% and 74.53% respectively.

Response Rates

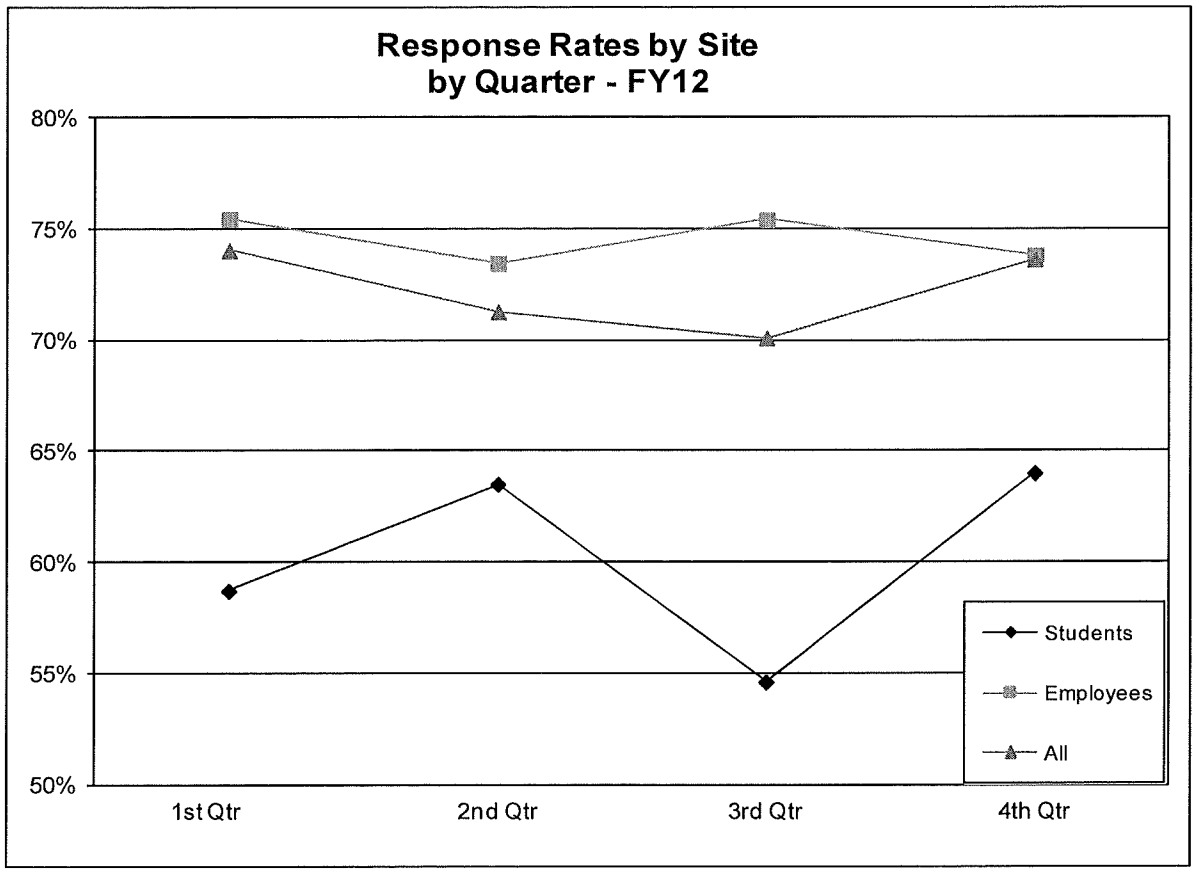
Site Type	FY 91	FY 08	FY 09	FY 10	FY 11	**FY 2012**
Students*	73.36%	70.19%	78.01%	77.05%	70.39%	**58.56%**
Employees	84.24%	77.02%	74.25%	76.71%	77.85%	**74.53%**
All	82.32%	76.92%	74.83%	76.76%	76.72%	**72.05%**

*Student population includes high school juniors and seniors, colleges, universities and vocational institutions.

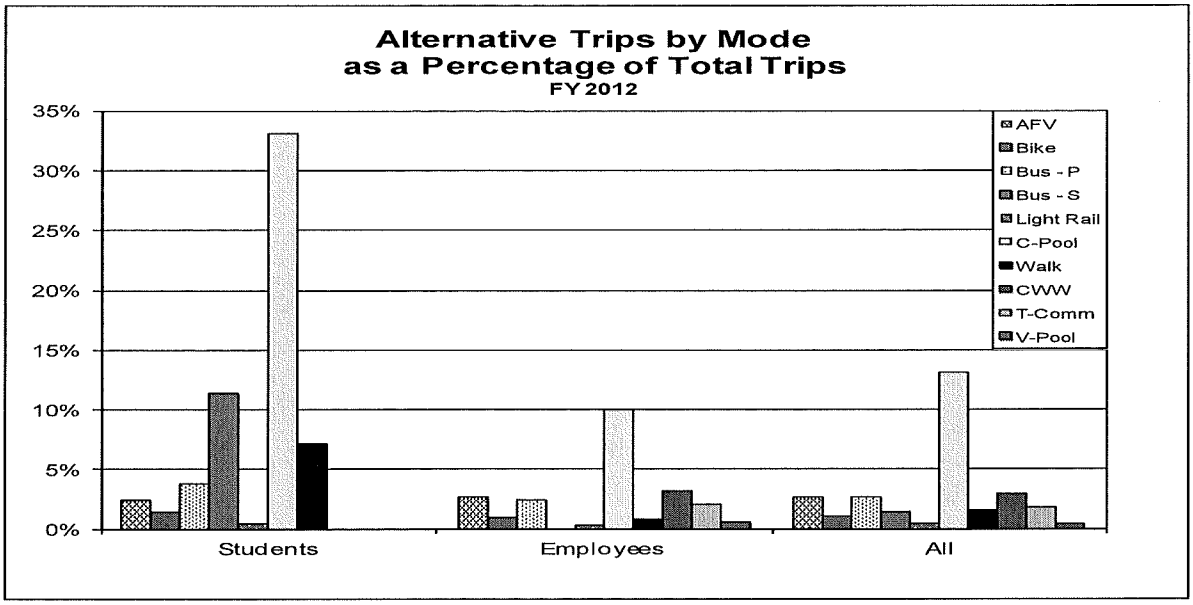
TRP Response Rates by Quarter for FY 2012

In FY12, the response rates fluctuated each quarter. Although there is no distinguishable pattern throughout the year, the first quarter had the highest response rates for 'All' sites. For 'Employee' sites, the first quarter had the highest response rates. 'Student' responses were their lowest during the third quarter, because Arizona State University conducted random sampling of students using the e-survey.

Site Type	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Year Average
Students	58.72%	63.52%	54.62%	64.02%	58.56%
Employees	75.45%	73.45%	75.40%	73.80%	74.53%
All	74.03%	71.27%	70.10%	73.63%	72.05%

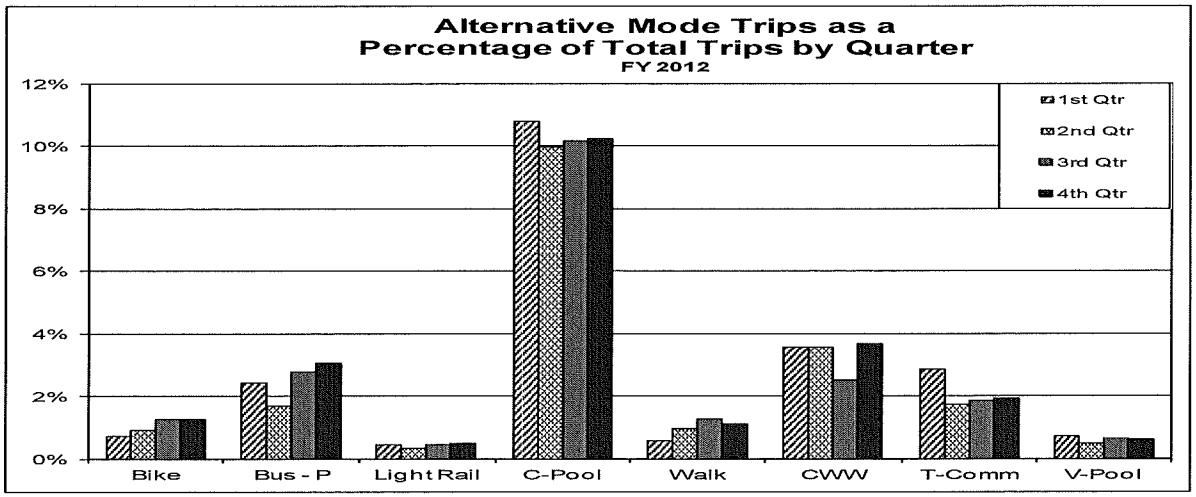


ALTERNATIVE MODE TRIPS



TRP participants continue to use alternative modes more often each year. During this year, carpool usage continued to be the highest type of alternative mode used for 'All' site types. 'Student' and 'Employee' sites used carpooling as their primary alternative mode.

Students used carpooling for 33.1% of all their commuting trips. Other alternative modes used mainly by students were taking the bus (15.2%) and walking (7.2%). These three modes account for over 55% of commuting habits by students. Employees carpooled 10.0% of the time, while CWW accounted for 3.2% of alternative trips and taking the bus resulted in 2.7%.



Carpooling continues to be the highest percentage of trips taken by alternative mode users. The first and fourth quarters showed the largest use of carpooling. The two other alternative modes mostly used by commuters (compressed work week and public bus) were used in the fourth quarter.

POUNDS OF POLLUTION

TRP participants continue to use alternative modes of transportation for 33.8% of their commuting miles. In FY12, for 'All' sites, pounds of pollution saved daily totaled 112,804 pounds per day.

There were multiple circumstances that affected the results of the amount of pollution saved by the program: 1) because of newer and environmentally cleaner vehicles on the road, the pounds of pollution factor was recalculated mid-way through the year from 46.0 to 48.7 miles per one-pound of pollution, thus causing a decrease in pounds of pollution saved; and 2) the number of completed surveys returned by employers cause fluctuations in the aggregated results year over year.

Pounds of Pollution Saved by Mode

	STUDENT SITES		EMPLOYEE SITES		ALL SITES	
MODE	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily [1]	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily [1]	Miles Daily (Both - Ways)	Pounds of Pollution Saved Daily [1]
Generated						
SOV	397,226		10,039,282		10,436,508	
Saved						
AFV	25,200	548	356,717	7,522	381,917	8,070
Bike	4,223	89	46,490	977	50,713	1,066
Bus (Public)	30,923	658	320,358	6,721	351,281	7,379
Bus (School)	82,445	1,756			82,445	1,756
Carpool	467,721	9,894	1,963,342	41,486	2,431,063	51,380
Light Rail	4,681	99	36,348	760	41,029	859
CWW*			502,126	10,626	502,126	10,626
TeleComm*			384,586	8,137	384,586	8,137
Vanpool			1,085,206	22,984	1,085,206	22,984
Walk	13,462	284	12,598	263	26,060	547
Alternative Mode Total	628,655	13,328	4,707,771	99,476	5,336,426	112,804
Total Miles	1,025,881		14,747,053		15,772,934	

* Miles not driven

1 To calculate the pounds of pollution saved daily, the "Miles Daily" was divided by 46.0 for the first and second quarters and 48.7 for the third and fourth quarters. Using the third and fourth quarters as an example, 48.7 is the number of miles driven needed to generate one pound of pollution using the most recent standards.

POLLUTION SAVED

TRP participants continue to save more pounds of pollution each year. This year alone, the amount of pollution potentially saved by the 683,513 employees/students responding to the survey was estimated at 20,320 tons.

Total Pounds of Pollution Saved

Site Type	Pounds of Pollution Saved Daily	Tons of Pollution Saved Weekly [2]	Tons of Pollution Saved Annually [3]	Potential Tons of Pollution Saved by TRP Annually [4]
Students	13,328	33.3	1,733	2,959
Employees	99,476	248.7	12,932	17,361
All [5]	112,804	282.0	14,665	20,320

Pounds of pollution saved are calculated by dividing the miles that were not driven by commuters using an alternative mode of travel by 46.0. Forty-six is the number of miles that is calculated to be driven in order to produce one pound of pollution.

Below is the equation to calculate one pound of pollution:

VOC	+	NOx	+	CO	+	PM	=	1 lb. of pollution *
6.82%		6.80%		86.34%		0.04%		

2 "Tons of Pollution Saved Weekly" is calculated by dividing the "Pounds of Pollution Saved Daily" by 2000, and then multiplying the result by the number of trips taken weekly by an average commuter, which is set to be five by the TRP, i.e. for students, (13,329/2000)* 5 = 33.3 tons.

3 Weekly tons are then multiplied by 52 to calculate "Tons of Pollution Saved Annually", 33.3 * 52 = 1,733 tons.

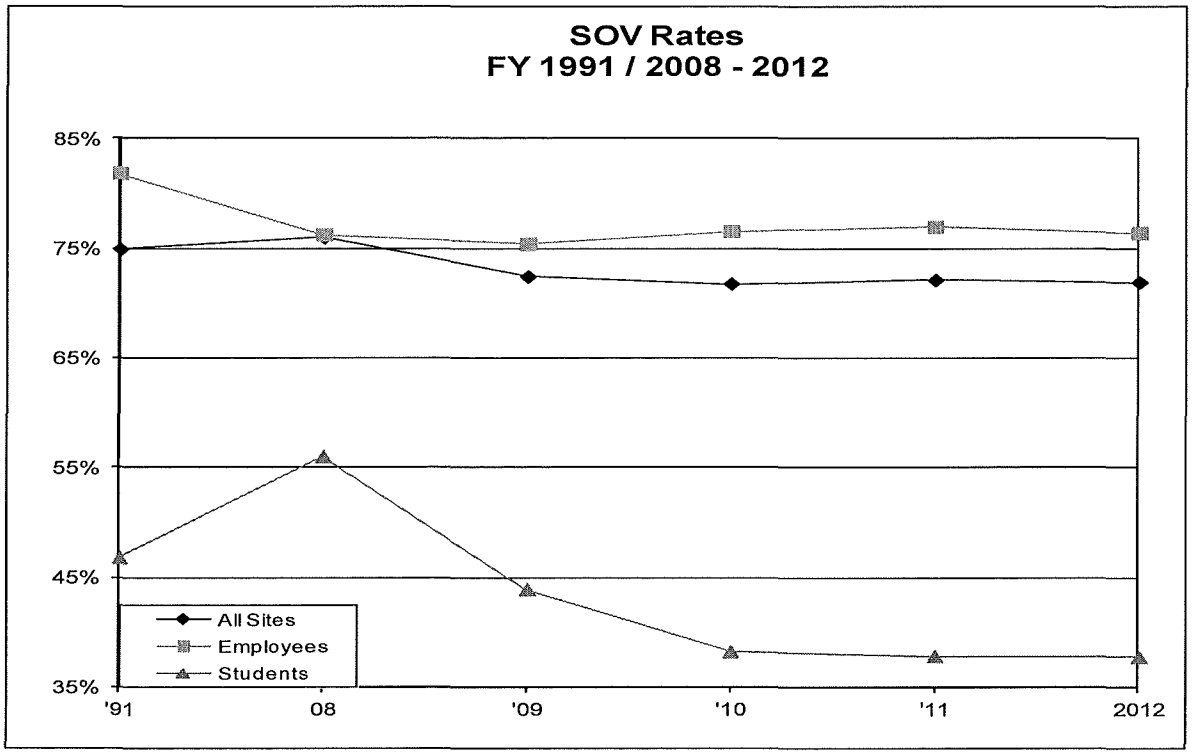
4 "Potential Tons of Pollution Saved by TRP Annually" is calculated by extrapolating out to the number of TRP participants who had the survey administered to them. The "Tons of Pollution Saved Annually" is divided by the response rate, i.e. 62,117 students answered the survey for a response rate of 58.56% (.5856); 1,733/.5856 = 2,959. All 106,081 TRP students could have saved 2,959 tons of pollution in FY 2012.

5 The numbers for 'All' site types is calculated by adding the totals from the 'Student' site and 'Employee' site rows.

SOV TRIP RATES

The Single Occupant Vehicle (SOV) trip and Single Occupant Vehicle Miles Traveled (SOVMT) rates indicate how well a company is doing at reducing employee/student trips and miles. In order for a company to achieve their reduction goal for the year it must meet or exceed either one of these target rates.

Of the 3,018 sites surveyed, 2,880 were analyzed this year for the purposes of the aggregate data. There were 138 first year sites (baseline year sites) that were processed.



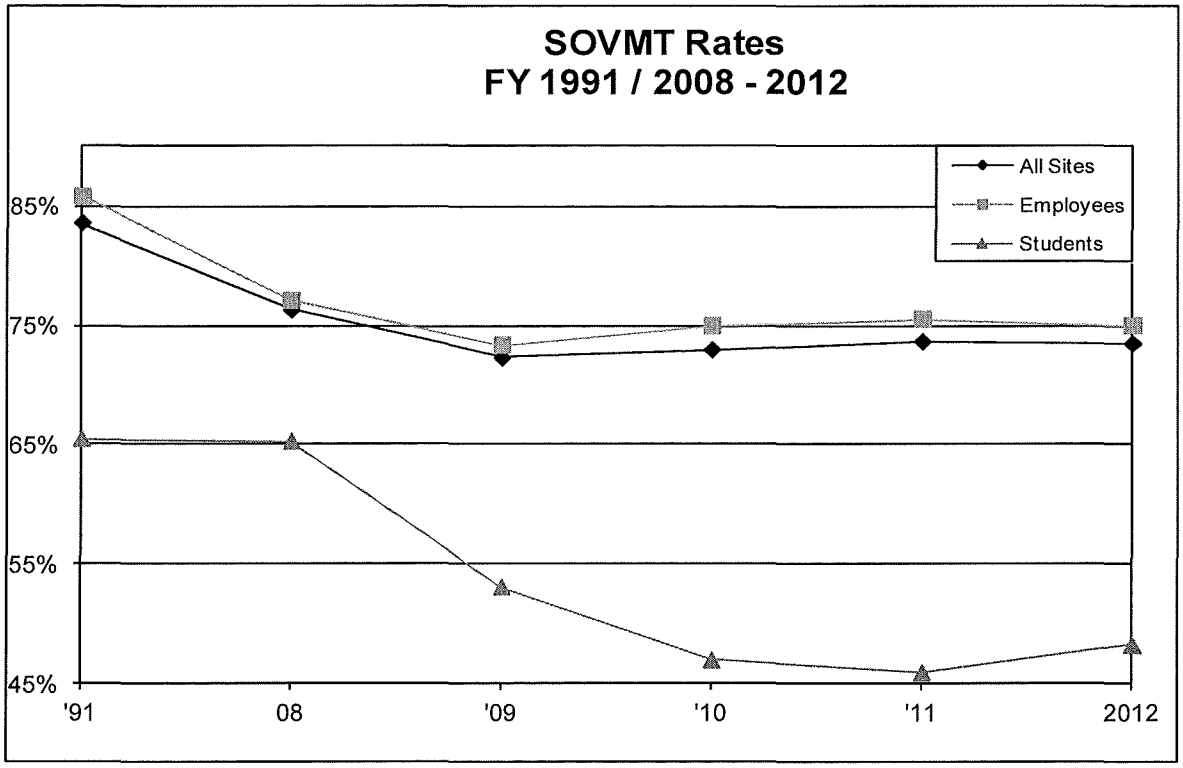
The SOV trip rate is calculated by dividing the number of SOV trips by the total trips taken for all commuters. This is also done separately for 'Employee' sites and 'Student' sites in order to compare their rate of change.

Single Occupancy Vehicle (SOV) Trip Rate

	Students		Employees		All	
		Change from Previous Year		Change from Previous Year		Change from Previous Year
FY 91	46.78%		81.86%		74.92%	
FY08	56.00%		76.22%		75.97%	
FY09	43.90%	-21.60%	75.38%	-1.10%	72.40%	-4.69%
FY10	38.21%	-12.96%	76.53%	1.52%	71.44%	-1.32%
FY11	37.82%	-1.02%	76.94%	0.53%	72.09%	0.90%
FY12	**37.73%**	**-0.23%**	**76.38%**	**-0.72%**	**71.89%**	**-0.28%**

SOVMT RATES

This year the SOVMT showed a decrease of 0.24% for 'All' sites when compared to last fiscal year. 'Student' and 'Employee' sites also showed the following rate changes, 4.98% and -0.71% respectively.



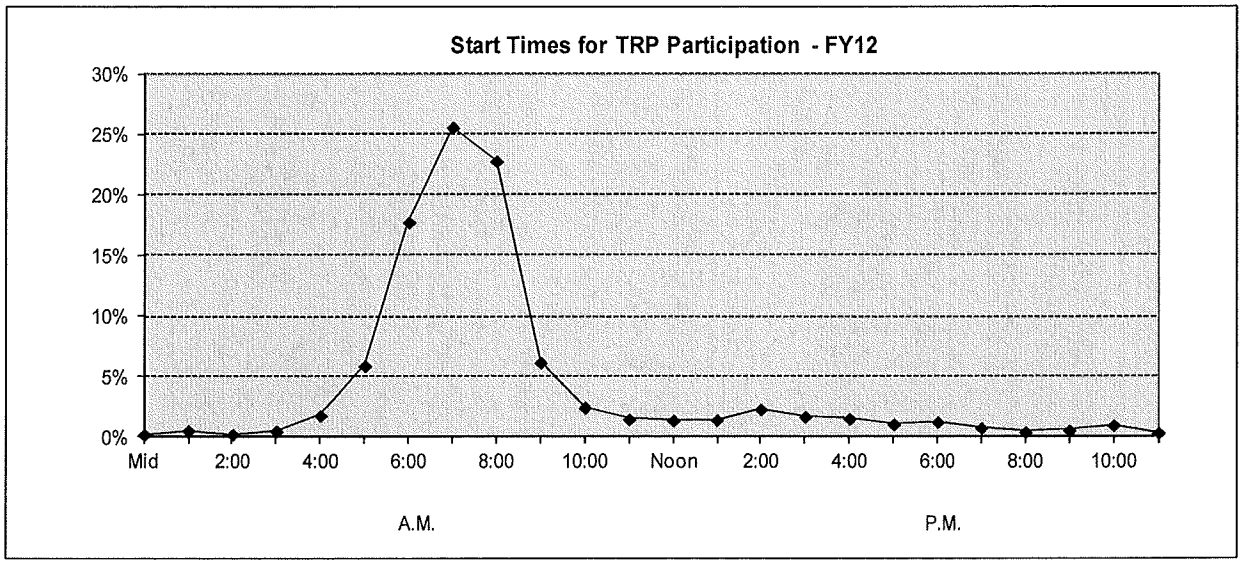
Similar to the methodology used for SOV trips, 3,018 sites were analyzed this year for the purposes of the aggregate data.

The SOVMT rate is calculated by dividing the number of SOV miles traveled by the total number of miles driven by all commuters. This is also done separately for 'Employee' sites and 'Student' sites in order to compare their rate of change.

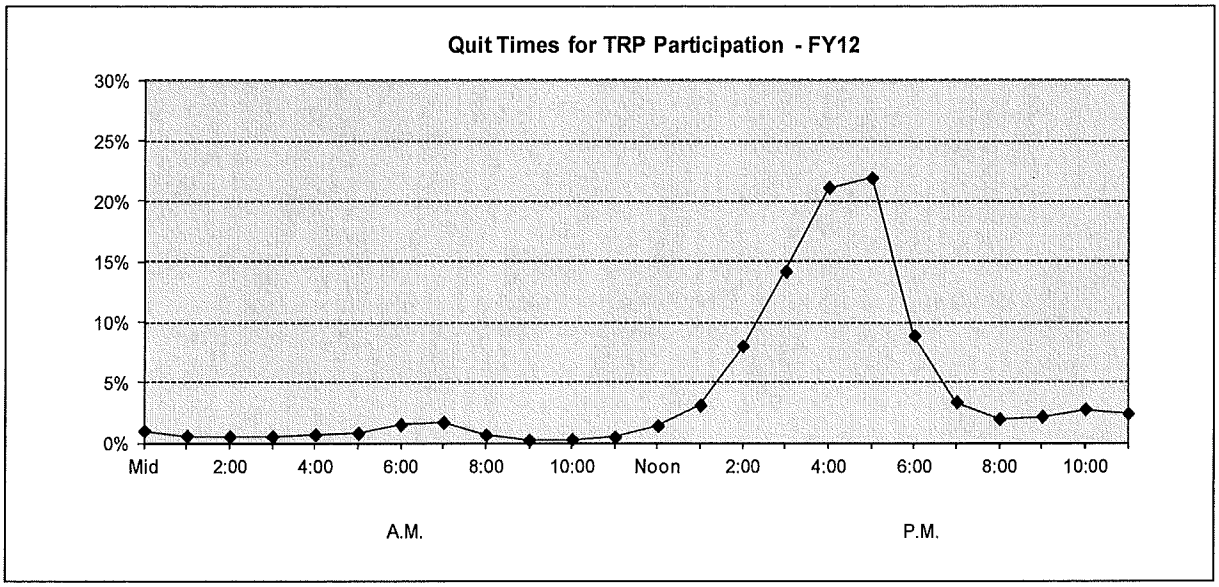
Single Occupancy Vehicle Miles Traveled (SOVMT) Rate

	Students		Employees		All	
		Change from Previous Year		Change from Previous Year		Change from Previous Year
FY 91	65.49%		85.78%		83.57%	
FY08	65.29%		77.10%		76.29%	
FY09	53.10%	-18.67%	73.37%	-4.83%	72.29%	-5.24%
FY10	46.98%	-11.52%	74.97%	2.18%	72.96%	0.92%
FY11	45.95%	-2.19%	75.55%	0.77%	73.64%	0.93%
FY12	**48.24%**	**4.98%**	**75.01%**	**-0.71%**	**73.46%**	**-0.24%**

COMMUTING TO WORK

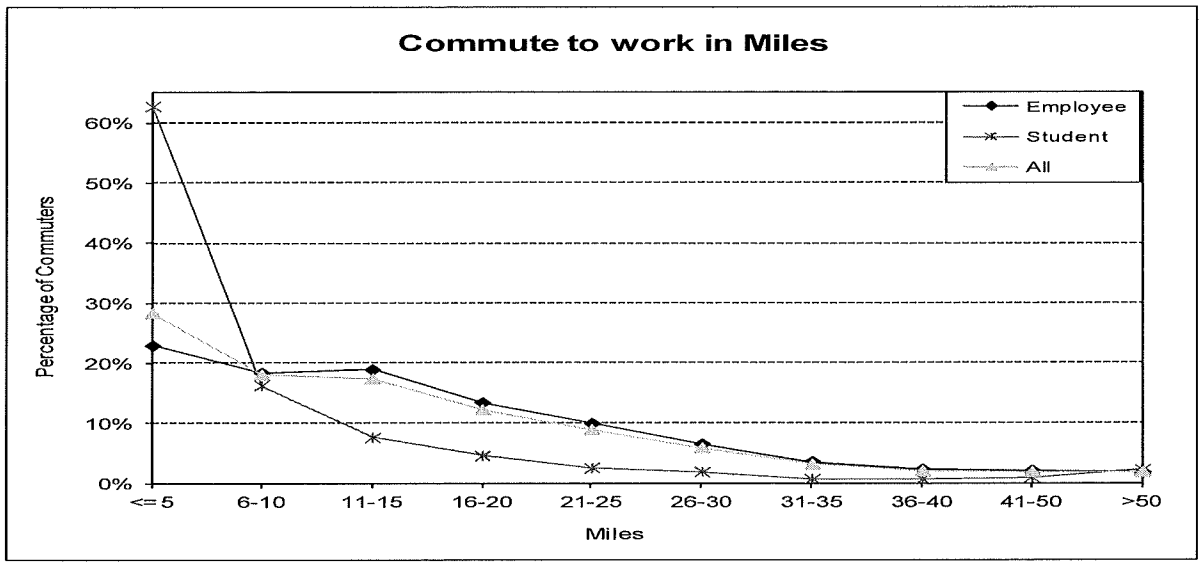


The peak hours for Maricopa County commuters traveling to work are between 5:00 a.m. and 8:00 a.m.; 72% of all commuters are on the road during this time. During the morning rush, the time between 7:00 a.m. and 8:30 a.m. is the most heavily traveled. There is also a second shift peak between 2:00 p.m. and 3:30 p.m. when commuters make their way to work.

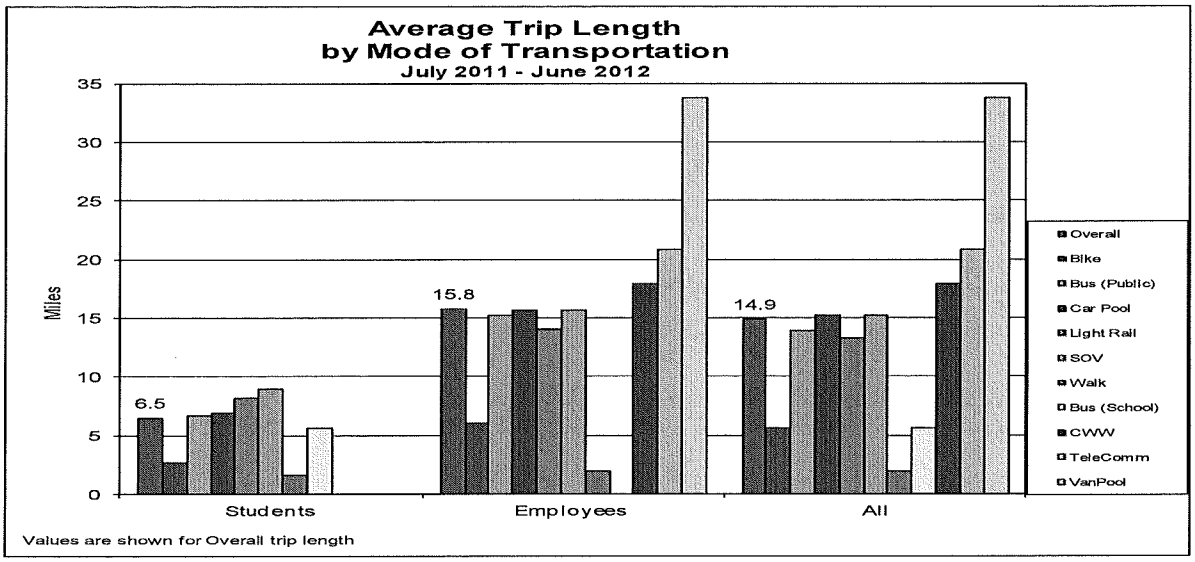


Conversely, quit times for commuters peak between 2:00 p.m. and 7:00 p.m.. Over 74% of all commuters are leaving the workplace during this time. However, the peak for departing workers is not as great as that of arrival times. This is caused by workers who complete their eight-hour shifts prior to the afternoon rush or those who put in extended hours. The time between 5:00 p.m. and 6:00 p.m. showed the largest numbers of commuters leaving from work.

HOW FAR IS THE COMMUTE?

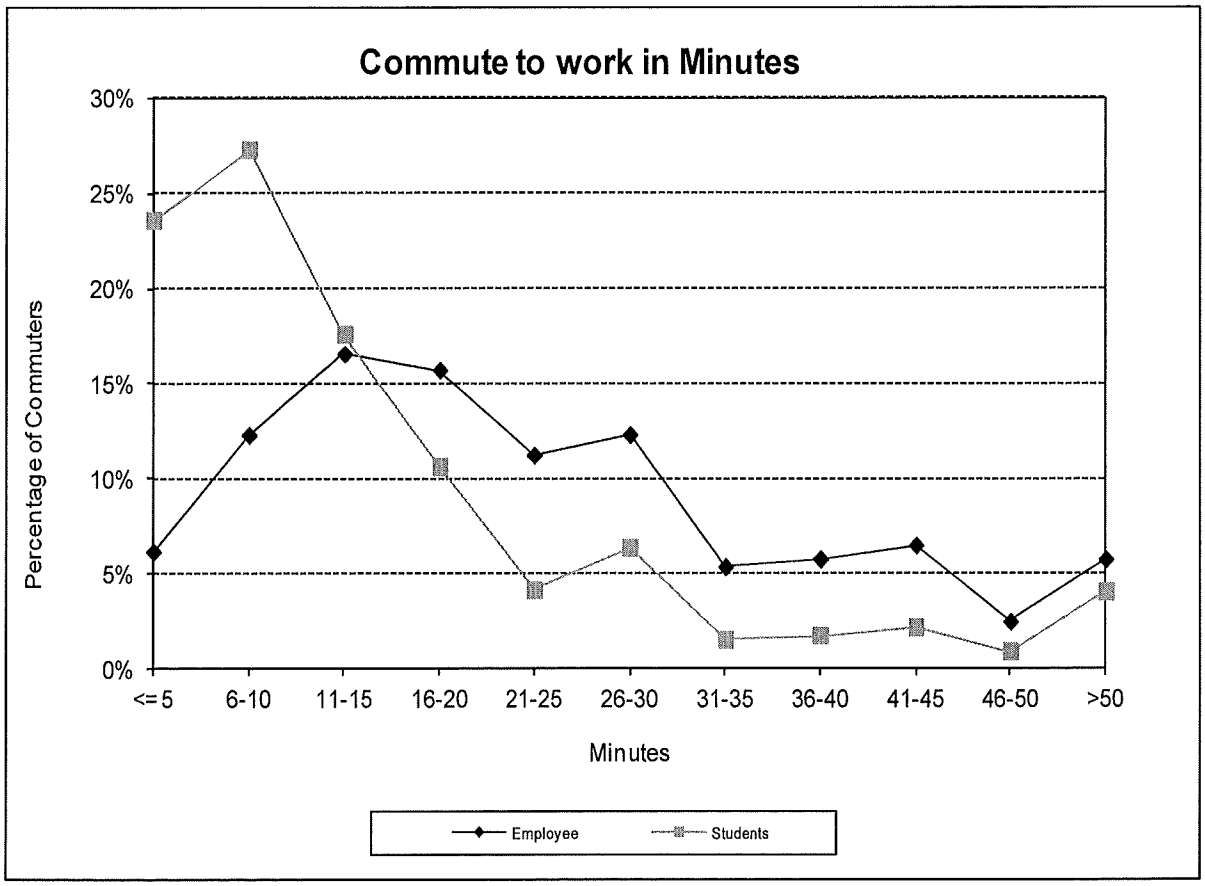


In FY12, the typical TRP commuter (employee or student) could have expected to drive, on the average, 14.9 miles one-way to work or school. While the average drive for an employee was 15.8 miles to work, students drove an average of 8.8 miles one-way to school. Overall, 28.4% of all TRP participants drive less than five miles to work/school. Another 44.5% of the commuters live between 11 and 30 miles from work. Over 9.1% of all commuters have a drive of over 30 miles.



The average trip length by mode split shows that employee trips on all accounts are longer than student trips. However, employees' longest commuting trips are taken using an alternative mode, not SOV's. The longest of these trips using alternative modes are vanpools (33.8 miles) and trips not taken (CWW's – 17.9 miles, and Telecommuting – 20.8 miles). This indicates that those commuters who live farthest from work are more likely to use these alternative mode types as their commuting method.

HOW LONG DOES THE COMMUTE TAKE?

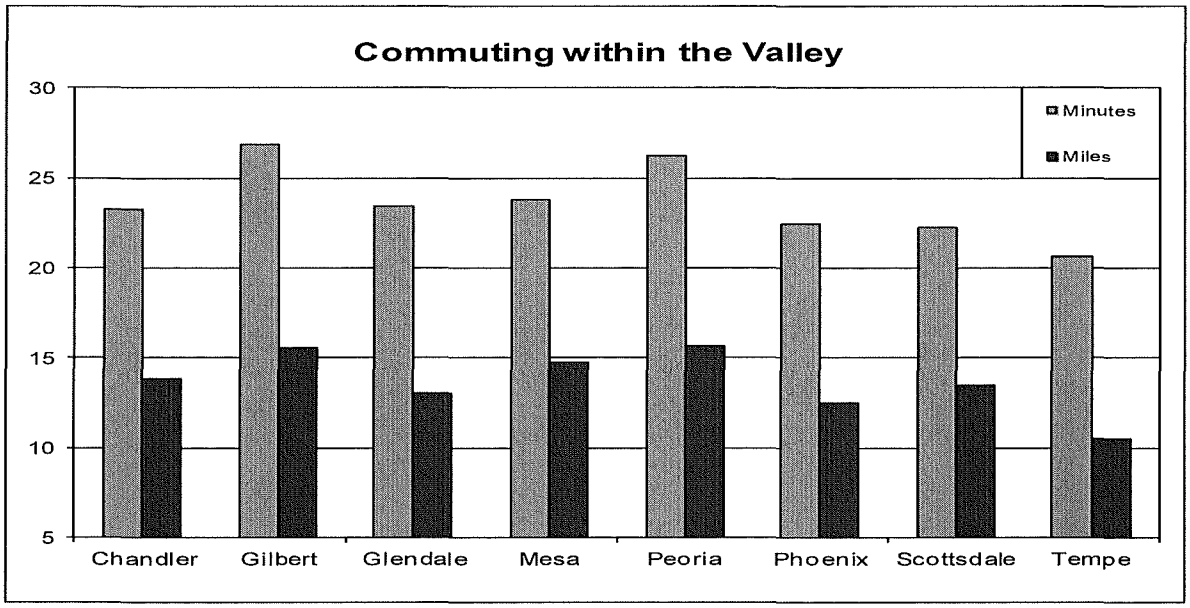


Typically, TRP participants can expect to spend an average of 24.7 minutes commuting to work or school. Students take an average of 17.5 minutes to get to school, while employees average 25.8 minutes to get to their worksite.

Approximately 54% of all commuters take less than 20 minutes to arrive at work/school. The largest group of all respondents is represented by those who take between 11 and 15 minutes to commute, while 24% of commuters take over 30 minutes or more to get to their worksite.

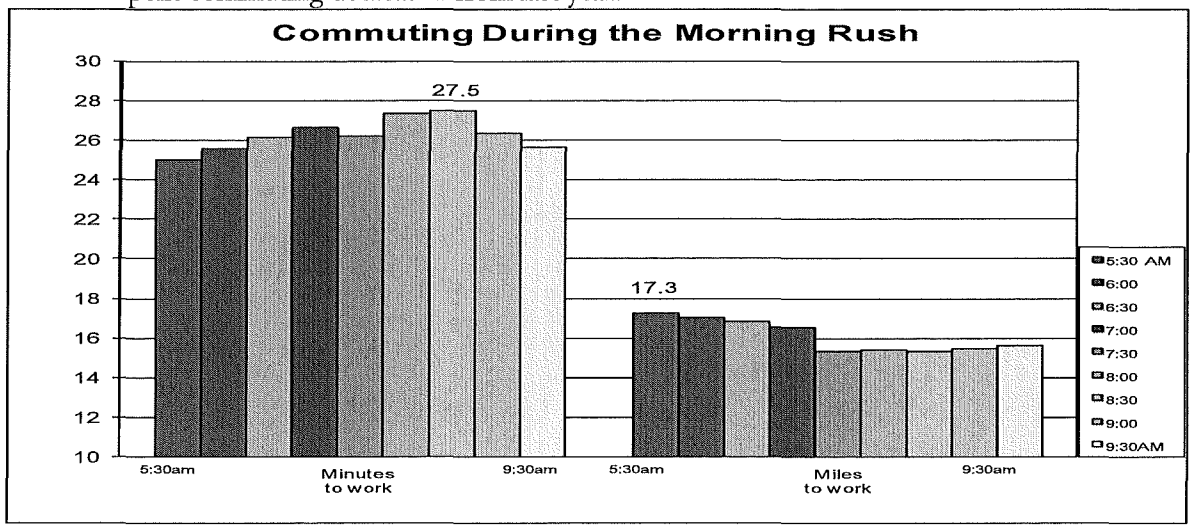
For students, 68% commute to school in 15 minutes or less. Nearly, 26% of all employees take more than 30 minutes to arrive at their workplace.

VALLEY COMMUTING PATTERNS



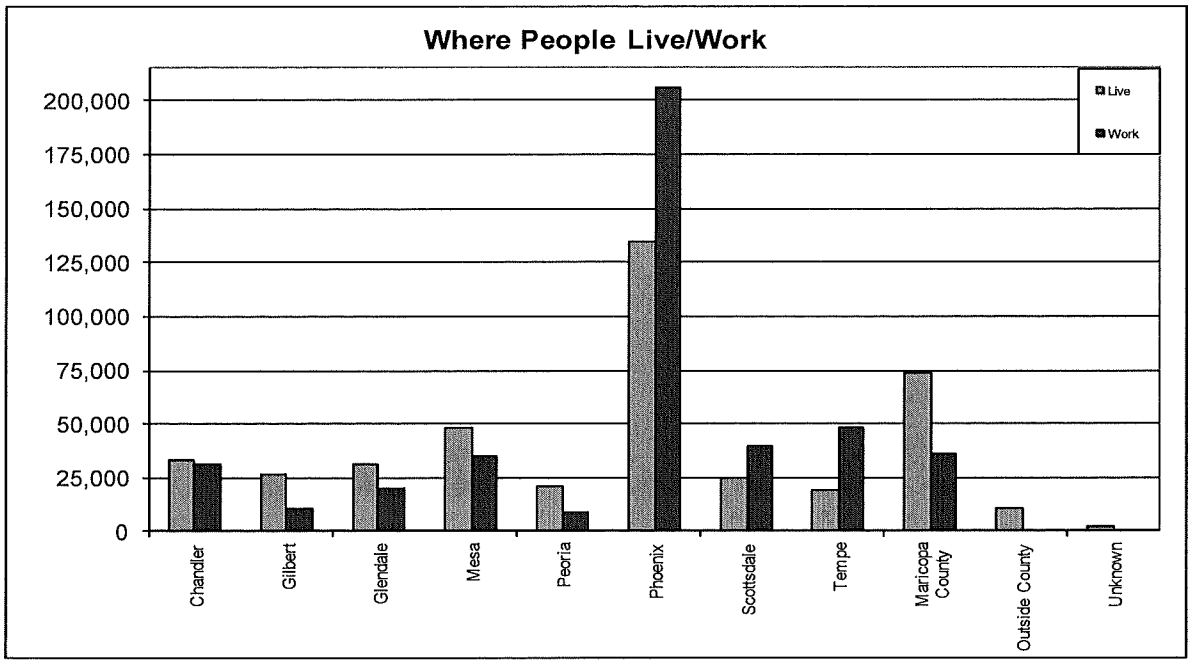
Of the eight largest municipalities in the Valley, the time and distance spent commuting to work can vary depending upon where one lives. For all communities, the time spent commuting correlates to the distance traveled to work.

The two Valley communities that have the longest commute in minutes and miles are Peoria and Gilbert. This may be that these commuters must travel outside of their area of residence to get to their worksite. For nearly all these major cities, TRP participants found that their distance traveled and time spent commuting decreased from last year.



For Valley commuters, the morning rush is worse during the later portion of the commute. The average morning commute takes about 27.5 minutes and is 17.3 miles long, both increased from last year. A TRP commuter may experience, nearly a 28-minute drive if they begin work at 8:30 a.m., even though it is one of the shorter commute trips. It is also noted that those who have longer commutes depart for work earlier in the morning.

WHERE TRP EMPLOYEES LIVE COMPARED TO WHERE THEY WORK



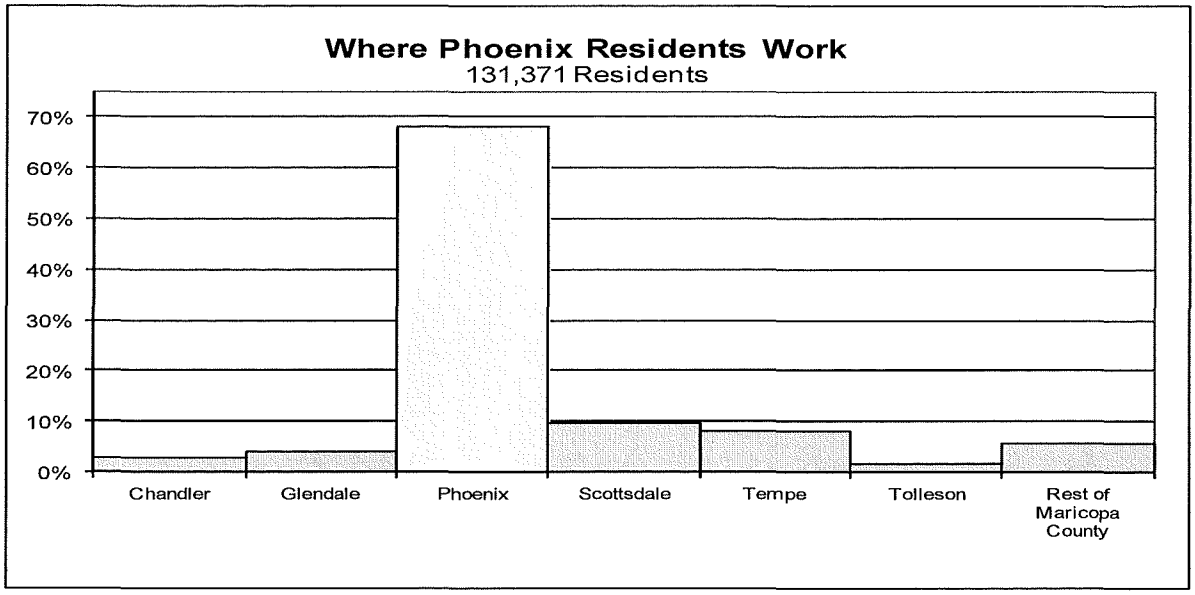
During FY12, 426,666 employees responded to the survey indicating their city of residence. For the purposes of this report, only those cities whose residents total 19,000 or more employees in the TRP for the year are listed.

As expected, the City of Phoenix is the largest contributor in both residents and number of employees in the workforce. While 134,723 residents live in Phoenix, 206,177 work within the city limits. Other cities that have a positive employee/resident ratio (more employees working in an area than live in that area) are Scottsdale and Tempe. This trend indicates that these cities have to accommodate more commuters coming into their communities during the rush hours. Additional scheduling of alternative modes of transportation will be needed in order to reduce traffic congestion associated with commuters getting to their worksite.

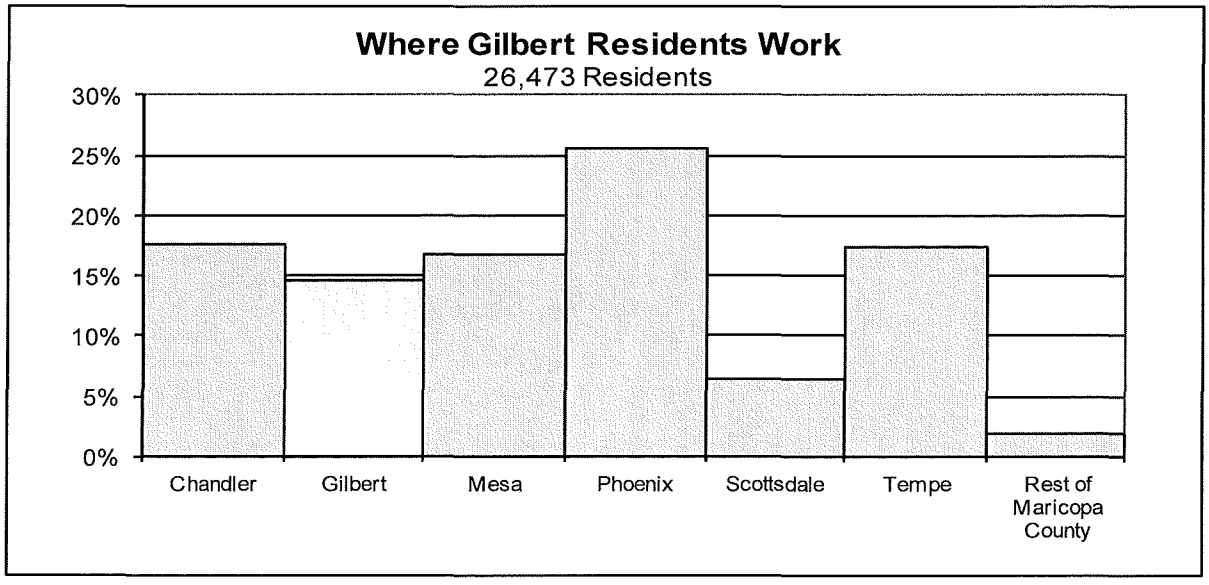
Conversely, all other major cities in the area have a negative employee/resident ratio. These communities also face the task of commuters returning to their residences. The Town of Gilbert shows true characteristics of a 'bedroom community'; while there are 26,676 residents in Gilbert who participate in the TRP, only 10,725 TRP participants work in Gilbert.

The following charts show two completely different examples of demographic trends here in the Valley. The city of Phoenix represents the typically large metropolitan area with major employers within the city limits, while the Town of Gilbert shows signs of being the suburban enclave where commuters live, but work in surrounding cities.

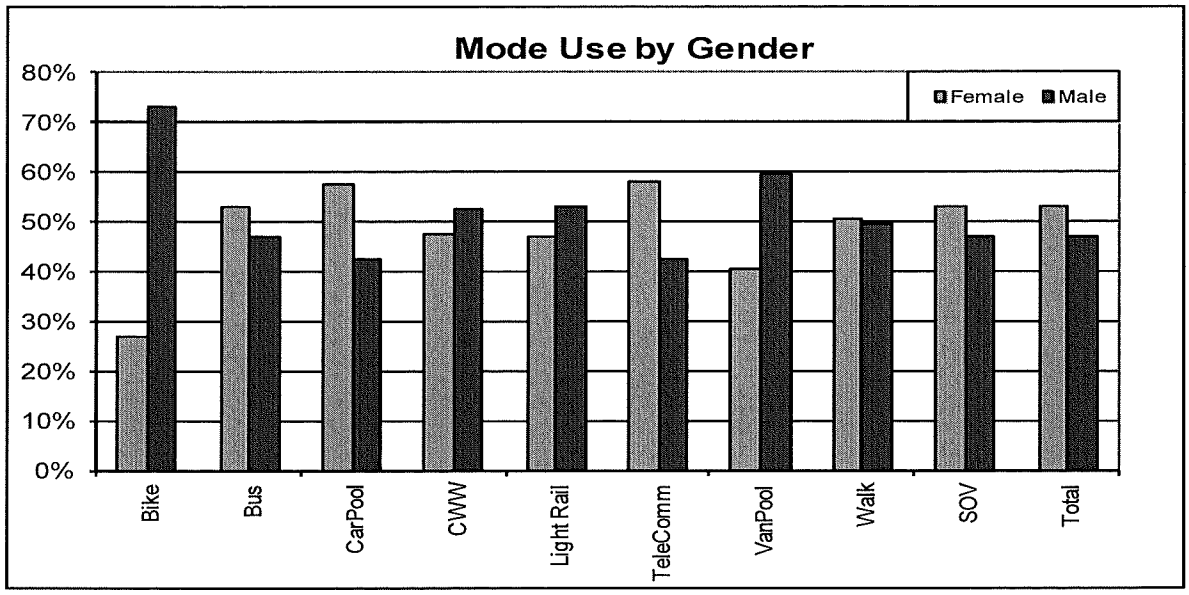
Of all Phoenix residents in the TRP, 68.3% (89,764) live and work within the city limits. Approximately 26% of all other Phoenicians work in adjoining major cities. While the rest of the city's residents work throughout the County, representing only 5.7% of Phoenix TRP residents.



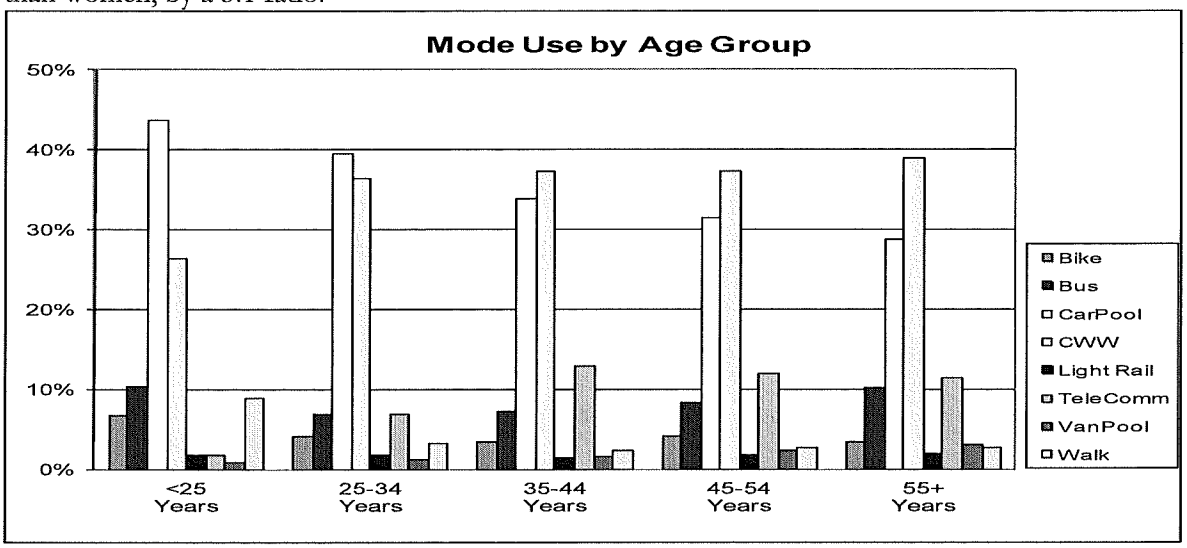
Representing the other side of commuter travel, the majority of the Town of Gilbert residents work in other cities in the Valley; over 85% work outside of Gilbert. Only 14.5% of the TRP participants (3,845) who live in Gilbert also work within the city limits. This indicates that Gilbert residents who participate in the TRP continue to seek work outside of the Town, resulting in a true bedroom community. Comparatively, for the other major cities in Maricopa County, the average percentage of residents who live and work in the same city is approximately 33% for TRP participants. The Town of Gilbert is substantially below the average for other major cities in Maricopa County.



DEMOGRAPHIC DATA



For this year, over 397,000 TRP participants answered the optional question on gender. Females account for 52.9% of the total responses. While women show a higher percentage than men do of carpooling and tele-commuting, men are more likely to use a light rail, compressed work week and vanpool. The greatest disparity is represented by bicyclists. Men are more likely to bike to work than women, by a 3:1 ratio.



For those who responded to the optional question on age, the older the age group in TRP, the more likely the commuter will use telecommuting and compressed work week (CWW) to get to their worksite. The younger age groups are more apt to use biking and walking when traveling to work. The <25 year old group is more likely to use a bike, carpool, walk or bus than any other group and are the least likely to use telecommuting as an alternative mode by a greater disparity. The 35-44 year old group telecommutes more often than other groups. The 55+ year-old group uses bus, CWW, light rail or vanpools more than any other group.

WORK ACTIVITY FOR TRP PARTICIPANTS

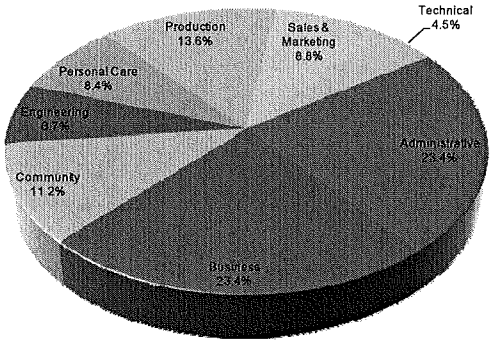
In recent years the TRP has monitored the work activity of employees by adding the following question. "What best describes your primary work activity on a regular basis?" The categories for work activity were chosen based upon demographic modeling tracked by the Maricopa Association of Governments (MAG). With a more detailed listing of each group described below. For brevity's sake, all work activities are abbreviated on the pie charts.

Administrative	Administrative/Clerical/Retail
Business	Business/Financial/Professional
Community	Community Support/Teaching
Engineering	Engineering/Research/Design
Personal Care	Personal Care & Services
Production	Production/Construction/Transport
Sales & Marketing	Sales & Marketing
Technical	Technical Support

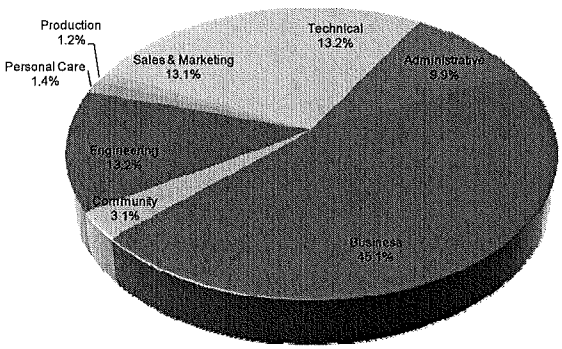
For an overall analysis of work activities by TRP employees, the chart on the left shows how commuters identify themselves in their jobs. Generally speaking, the one of largest number of respondents fall into the category of 'Administrative'; over 23% of employees claim they perform some type of administrative function daily.

In order to give a contrast of what type of work activity an employee does and what type of alternative mode they may use, a side by side comparison is shown below. To limit charts and graphs, only one example of an alternative mode is shown, tele-commuting. Comparatively, 9.9% of all tele-commuters work an administrative job. This comparison makes perfect sense. Those in 'Production' and 'Personal Care' are less likely to have the opportunity to tele-commute, because their type of job does not allow for them to work from home.

Primary Work Activity of TRP Employees



Tele-Commuting by Work Activity



CONCLUSION

In FY12, the TRP is currently in its twenty-third year. Analysis of the TRP data show that the employees/students participating in the TRP continue to be strong supporters of using alternative modes of transportation in order to get to work or school. Although the TRP has consistently shown an increase in the number of trips saved and pounds of pollution saved each year; in part, this year's increase can be attributed to a 13% increase of gas prices throughout the Valley.

A number of changes in methodology used to collect and calculate commuter miles, trips, modes and pollution saved impact this reporting period. The reporting outcome was affected by one or more of the following reasons: 1) Credits for Alternative Fuel Vehicle (AFV) use were calculated for trips or miles driven. Full or partial credit was given to electric, hybrid, hydrogen and natural gas vehicles; 2) other external factors impacted commuter driving patterns, such as: the calculation factors used to determine how many miles are driven to produce one-pound of pollution. The regional miles/pound factor increased from 46.0 to 48.7; and 3) the number of completed surveys returned by employers cause fluctuations in the aggregated results year over year.

Alternative mode users in the TRP continue to support the program by showing a substantial amount of miles driven weekly in order to reduce Valley pollution. The total amount saved this year was 26.6 million miles weekly for alternative mode commuters. Carpool and vanpool miles accounted for 65.9% of all miles saved. The miles saved by TRP commuters resulted in 14,665 tons of pollution not being produced. Even though commuting distances and time traveled to the worksite have increased this year, TRP participants continue to make environmentally sound decisions by choosing to use an alternative mode in order to lessen their SOV trips.

The employees who participate in the program continue their support of the TRP as shown by a high survey response rate, 74.53%. Employee's contribution to the amount of pollution saved annually accounted for 88.2% in the TRP. The e-survey continued to be a successful format for TRP employers to survey their employees. The number of companies using the e-survey this year increased from 234 to 288, 45% of all employees used the e-survey this year.

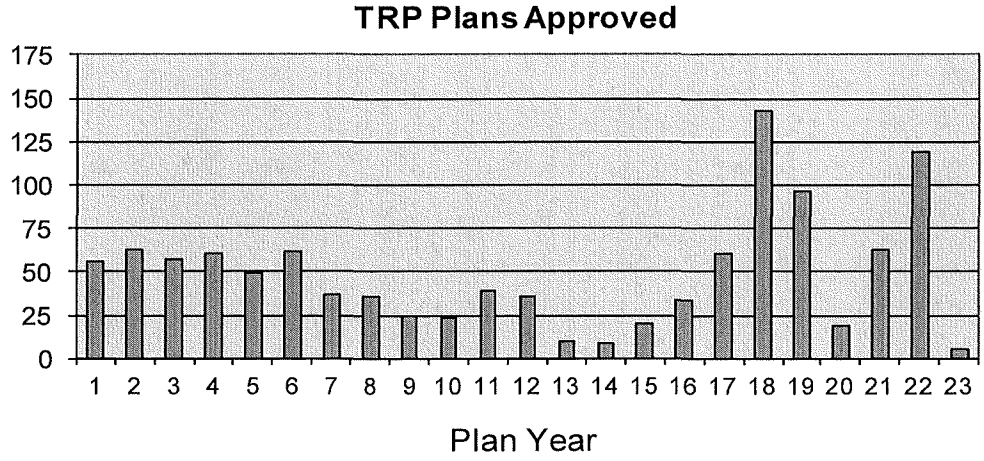
The miles saved by alternative mode use for students was 1,733 tons of pollution annually. Since new high school students enter the TRP annually, RPTA's efforts to educate students on the program's environmental benefits represent an ongoing training opportunity. Educating students on the use of alternative modes to commute will only increase the probability that once the students are out in the workplace they will continue with their learned environmental commuting practices.

Near Term Goals:

- Continue to increase the number of TRP companies that use the e-survey, so that the majority of their employees use the electronic version, where 50% of all employees and 25% of all students are using the e-survey.
- Complete the TRP data migration and systems application project.
- Collaborate with Valley Metro / RPTA on the development of web based training modules for TRP transportation coordinators (TCs).

TRIP REDUCTION PLANS

During Fiscal Year 2011-2012, the County received 1,121 plans and presented 1,084 plans to the Task Force for review and approval. Of those approved by the Task Force 56 of them were first year plans.



MONITORING

The TRP staff will follow-up with employer to confirm their approved plan has been implemented/documented. A substantial amount of monitoring occurs through written and verbal channels, with the balance accomplished by staff visiting the employer sites. During this year, 458 monitoring calls were made and 916 site visits were conducted. When an employer fails to implement or document one or more approved measure(s), staff will issue a 'Request for Documentation' (RFD) to resolve the matter. During this year, staff issued 551 RFDs.

ENFORCEMENT

Enforcement is initiated when an employer fails to respond to staff's outreach regarding a pending delinquency. Enforcement activities occurring during FY12 are as follows:

- Sixty -eight (68) Notices of Violation (NOV) were issued for failure to submit a plan, supply documentation or appoint a Transportation Coordinator.
- No formal legal action was taken and no civil penalties were levied in FY12.

Valley Metro RPTA
TDM Survey Results 2013

Spring 2013

WESTGROUP
RESEARCH
3033 N 44th Street, Ste. 150
Phoenix, Arizona 85018
602.707.0050

Executive Summary

This report presents the results of a telephone survey of residents living in Maricopa County conducted by WestGroup Marketing Research, Inc. The purpose of the telephone survey is to assess participation in, and reactions to, the Trip Reduction Program and Transportation Demand Management for Valley Metro. ***Transportation Demand Management (TDM)*** refers to various strategies that change travel behavior (how, when and where people travel) in order to increase a transportation system's efficiency and achieve specific planning objectives. TDM strategies encourage more efficient travel patterns, such as shifts from peak to off-peak periods, from automobile to alternative modes, non-travel alternatives and from dispersed to closer destinations. The study was conducted in partnership with the Arizona Departments of Environmental Quality and Transportation, Maricopa Association of Governments, Maricopa County Air Quality Department and Valley Metro.

The interviews were conducted during March and April, 2013. Results are based on 400 telephone interviews conducted with 199 male and 201 female residents. Quotas were set to target approximately three quarters of employed residents, either full or part time (employed n=300), while remaining residents were either unemployed, house-spouses, students, or retired. The survey took approximately 12 minutes to complete. The total sample has a margin of error of $\pm$5.0%.

Perceptions of Valley's Major Issues

- In 2013, nearly one quarter (23%) of those surveyed mentioned an air quality/transportation-related issue as being one of the most important issues facing the Valley. This is similar to the 21% recorded in each of the previous two waves of this survey.
- In general, other than air quality/transportation issues, the issue most often mention by those surveyed as an important issue facing the Valley was the economy/unemployment (mentioned by 42%), although this represents a significant decrease from 2012 (56%). This suggests that economic anxiety has lessened in the general Phoenix metropolitan area.
- Approximately 85% of residents surveyed indicated that traffic congestion is either a big or moderate problem in the Valley. This is comparable to the 85% recorded in 2012.
- Approximately half (53%) of residents indicated that traffic congestion is either a big or moderate problem for them *personally* (up significantly from 39% in 2012).

Media Awareness

- Approximately 42% of residents surveyed indicated that they recall seeing or hearing some type of advertising for Valley Metro. This is statistically similar with the 2012 figure (47%).
- Approximately 51% of residents indicated they have heard traffic reporters on the radio reminding drivers to use an alternate mode of transportation. One in ten (11%) residents indicated they have received something in the mail that encourages people to Share the Ride or Try 1 in 5. These percentages were statistically similar with the figures recorded in 2012.

- More than three quarters (79%) of residents indicated that they feel "very" or "somewhat favorable" toward advertisements that encourage people to use alternate modes of transportation. While this figure is statistically similar with the 75% recorded in 2012, a significant increase is observed in the percentage of people who selected the highest rating "very favorable" (36%, up from 28%).
- Approximately 59% of residents surveyed indicated that they recall seeing or hearing news stories about Valley Metro services or transit services in general. This is statistically similar with the 2012 figure (63%).
- Approximately 44% of residents indicated that they have done nothing in response to advertising and news stories pertaining to pollution and driving alone, which is consistent with the 43% recorded in 2012. Otherwise, top mentions of actions taken included driving less often (mentioned by 13%), carpooling/vanpooling (10%), and combining trips (10%).
- Fewer residents indicated that they drove less often based on this media compared to 2012 (13%, down from 21%), and fewer indicated that they carpooled or vanpooled (10%, down from 16%) in response to this media.

Commuting Behavior

- The percentage of employees/students using traditional alternate modes of transportation (not including telecommuting or compressed work schedules) was generally similar compared to 2012 (17%, compared to 14%). Excluding telecommuting and compressed-schedule, approximately 74% of employees/students indicated that they always drive alone.
- Total alternate mode usage *including telecommuting and compressed schedules* increased to 43% from 37% in 2012.
- As a percentage of people, reported transportation modalities for getting to work or school were generally similar compared to 2012. Approximately 86% of employees/students surveyed indicated that they drive alone at least once a week to get to work or school (compared to 88% in 2012).
- Approximately 21% of total *trips* from surveyed employees/students were via a traditional alternate mode of transportation, comparable to the 18% recorded in 2012. The percentage of carpooling trips also remained comparable at 10% (compared to 9% in 2012).
- The percentage of total trips made using alternate modes of transportation, or not made because of telecommuting and compressed work weeks is 31% in 2013 (compared to 24% in 2012).
- Approximately 23% of employees and students indicated that they take more than five trips per week, and 48% of those residents attributed this to taking more than one trip on some days.
- In 2013, the carpool frequency among carpoolers remained similar to 2012 (3.2 days per week average vs. 3.3), while the percentage of those who utilize carpooling is 16% overall (similar to the 13% recorded in 2012).

- The average number of days per week in which people indicate that they drive alone as a commute method remained similar to 2012 (4.5 vs. 4.7).

Comparison of Large and Small Organizations

- Percentages of transportation modality, compared to 2012, were generally similar this year between employees in large or small organizations. Approximately 88% of residents surveyed who work in large organizations indicated that they at least drive alone or use a motorcycle one day to commute to work, while 19% indicated using a traditional alternate mode of transportation. Approximately 43% reported using any kind of alternate transportation mode. For residents in small organizations, these figures were 89%, 27%, and 39%, respectively, and are not significantly different than the figures for large organizations.
- Employees at large organizations were more likely than employees at small organizations to indicate that they telecommute (21% vs. 11%) or have a compressed work schedule (12% vs. 4%).
- The percentage of employees at small organizations who indicated they utilize telecommuting decreased significantly compared to 2012 (11%, down from 22%) and is at the lowest level recorded in recent years. The percentage of those who indicated they utilize carpooling increased significantly (19%, up from 9% in 2012).
- Additionally, employees at small organizations were more likely than employees at large organizations to indicate that they utilize carpooling/vanpooling (21% vs. 12%).
- Alternate mode trips account for approximately 30% of work trips among employees of large organizations, and for 28% of work trips among employees from small organizations.

Perspectives on Alternate Mode Usage

- Employees and students who use alternate modes of transportation most often indicate that convenience (34%) and saving gas/ money (15%) are the primary motivations for using those modes of transportation, and this has been the case in each of the last several years (note, in 2008 and 2009, data did not include student or part-time employee responses).
- On average, carpoolers report having two or three passengers in their carpool or vanpool (2.5 mean, compared to 2.2 in 2012). Caution is encouraged as these means are based on small sample sizes (n=53 in 2013 and n=38 in 2012).
- Employees most often indicated that they would go through their work place to find a carpool partner (26%); this percentage, while comparable to the 30% recorded in 2012, is significantly lower than figures recorded in previous years (42% to 47%).
- Approximately 35% of employees indicated they were aware of the Valley Metro matching system, which is similar to the 40% recorded in 2012 (however, it should be noted that the sample base in each year was comprised of slightly different populations).

- Approximately 58% of employed residents indicated that that "yes," they would be likely to consider Valley Metro's matching system.
- Approximately 42% of employees who do not currently utilize carpooling and vanpooling indicated that they would be very or somewhat likely to consider carpooling/vanpooling if they knew there was a customized matching system for their worksite, which is comparable to the 46% recorded in 2012. The percentage of "very likely" responses increased significantly from 2012 (17% vs. 8%) while the percentage of "somewhat likely" responses decreased significantly (25%, down from 38%).

Factors Affecting Commute Behavior

- Approximately two thirds of non-alternate mode users suggested changes that may make it possible for them to use an alternate mode of transportation to commute to work or school in the future (66%, consistent with the 66% recorded in 2012).
- Over half (54%) of residents surveyed indicated that they have taken some kind of action in response to increased gasoline prices. This is statistically similar to the percentage recorded in 2012 (58%). The most common response mentioned was making fewer trips (20%), while others indicated combining trips (12%) and utilizing more efficient vehicles (8%).
- The majority (68%) of residents who indicated that gasoline prices had not affected their driving habits also indicated that they have no current considerations of changing their driving habits in general. Encouragingly, this is a significant decrease from 2012 (84%). The most common response mentioned among those who did was combining trips (5%).
- Approximately 44% of residents surveyed report riding a bicycle, which is comparable to the 2012 figure (48%). Over one fourth (27%) of residents who ride bicycles but not to work/school indicated that they would be somewhat or very likely to ride their bike to a transit stop and take it along with them, representing a significant increase from 2012 (17%).
- As in 2012, the method with the highest percentage of "9" or "10 – very willing" ratings was to occasionally work from home (40%, comparable to the 41% recorded in 2012). This was followed by utilizing a compressed work schedule (37%), making fewer automobile trips (36%) and walking on short trips or errands (33%). The options with the lowest percentage of top-two ratings were using the local bus service (14%) and using the express bus or RAPID service (14%).
- The type of information selected most often as likely to encourage alternate modes was about personally saving money (63%), followed by saving time (54%) and improving the community (53%). Information about reducing air pollution was selected least often (46%). Multiple significant decreases were observed compared to 2012, indicating that messaging may be registering less urgently this year with residents.

Conclusions

1. The level of concern related to air quality, traffic and growth remained stable compared to 2012, while residents' *personal views* of traffic congestion in the Valley are more urgent in 2013: more than half view traffic congestion as a big or moderate problem *personally*. Further, as economic concerns in 2013 seem to have decreased compared to 2012, traffic concerns may take a more pronounced space in the mindshare of residents.

2. Recall of advertising and news stories related to efforts to reduce pollution and frequency of driving alone remained stable compared to 2012, and reported non-action based on such media also remained stable. This indicates that the attitudinal 'needle' based on advertising efforts has generally stayed in the same position since 2012.

3. Demographically, advertisements appear to be more effective with *female residents*, which is supported also by the finding that females are more receptive to "reasons-why" people should utilize alternate modes of transportation. Additionally, male residents were more likely to *actually utilize* at least one form of alternate transportation mode than female residents, which suggests that opportunity to increase use of alternate transportation modes is higher among female residents.

4. While the increases were not statistically significant, there was an increase in the percentage of employees/students who reported to use traditional alternate modes compared to 2012, as well as in the percent reporting alternate mode usage including telecommuting and compressed schedules. These slight increases along with a slight decrease in the percentage of those reporting to drive alone at least once a week and a notable increase in the percentage of total trips made (or not made due to telecommuting/CWW) are indicators of a positive change in the commute behavior of employed residents and students.

5. The percentage of total alternate transportation trips made by employees of large organizations and small organizations did not differ significantly, however, employees at small organizations were more likely to indicate that they utilize carpooling/vanpooling. Further, overall interest clearly exists for the Valley Metro worksite matching system, but awareness of the system continues to lag. Given that the Maricopa County Trip Reduction Program is *required* for larger organizations, it seems that a significant opportunity to bridge the carpooling gap exists for employees of larger organizations.

6. When asked what could motivate alternate mode usage, smaller percentages of residents indicated that any of the messages presented would be highly motivating. It may be that residents do not have the same sense of urgency about making changes to their commute behavior as the economy and gas prices stabilize.

APPENDIX R

PUBLIC HEARING PROCESS DOCUMENTATION

"TO BE INSERTED"

APPENDIX S

RESPONSE TO COMMENTS

"TO BE INSERTED"