

Air Quality Presentation



**Planning Certification Review
November 2009**

ENVIRONMENTAL
PROGRAMS

Role of MAG in Air Quality

Regional Air Quality Planning Agency for Maricopa Area

- Clean Air Act Section 174
- Designated by Governor Bolin in 1978
- Recertified by Arizona Legislature in 1992





Air Quality Memorandum of Agreement

Framework for Coordinated Decision Making in Planning, Development, Implementation and Enforcement of Air Quality Actions

- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Maricopa County Air Quality Department
- Maricopa Association of Governments



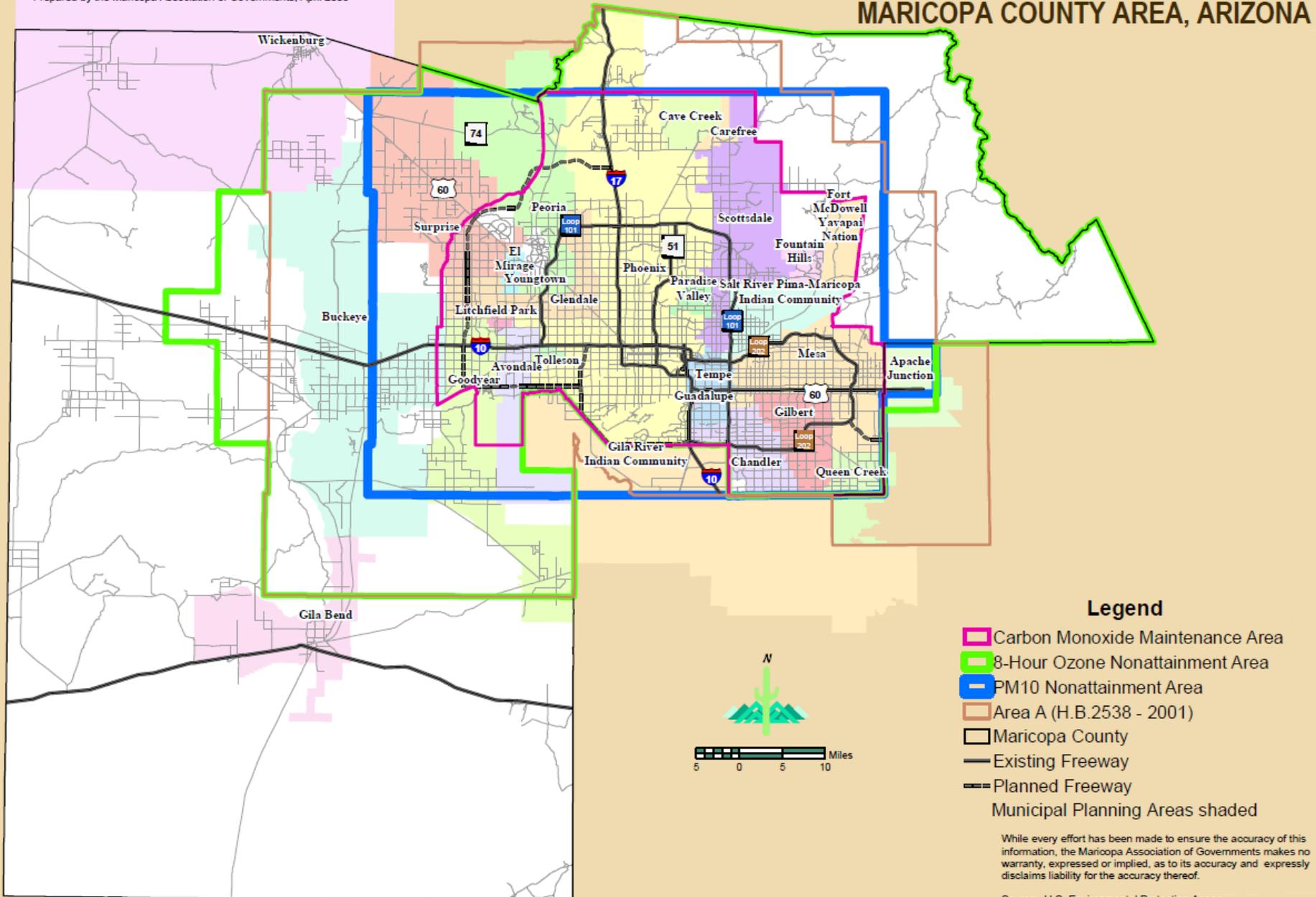


MAG Air Quality Technical Advisory Committee



- Local Governments
- Citizens
- Federal Highway Administration
- Environmental Protection Agency
- Arizona Department of Transportation
- Regional Public Transportation Authority
- Memorandum of Agreement Parties
- Key Stakeholders-Private Sector

AIR QUALITY NONATTAINMENT AND MAINTENANCE AREAS FOR THE MARICOPA COUNTY AREA, ARIZONA



Legend

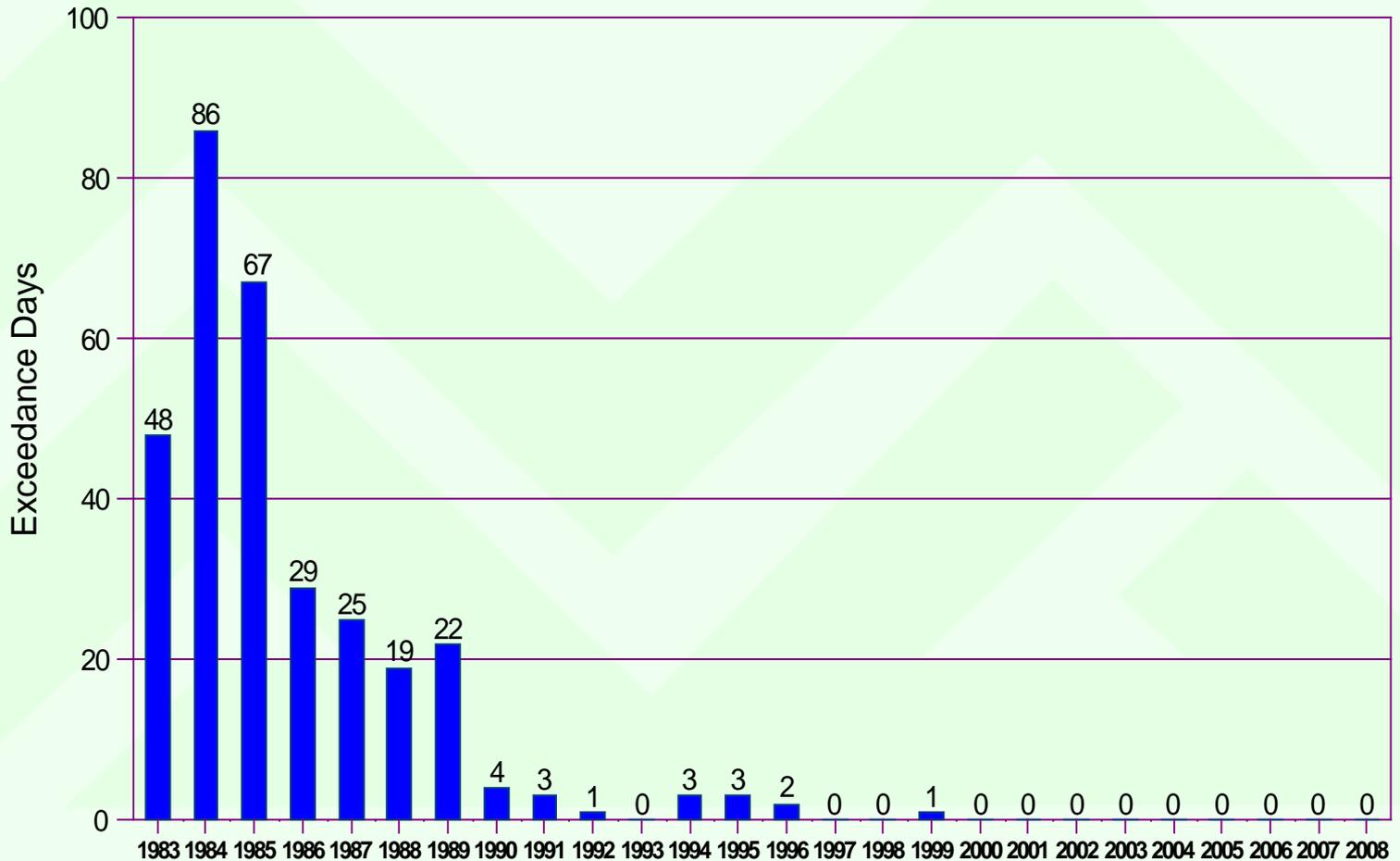
- Carbon Monoxide Maintenance Area
- 8-Hour Ozone Nonattainment Area
- PM10 Nonattainment Area
- Area A (H.B. 2538 - 2001)
- Maricopa County
- Existing Freeway
- Planned Freeway
- Municipal Planning Areas shaded

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



Number of Carbon Monoxide Exceedance Days

Maricopa County Nonattainment Area

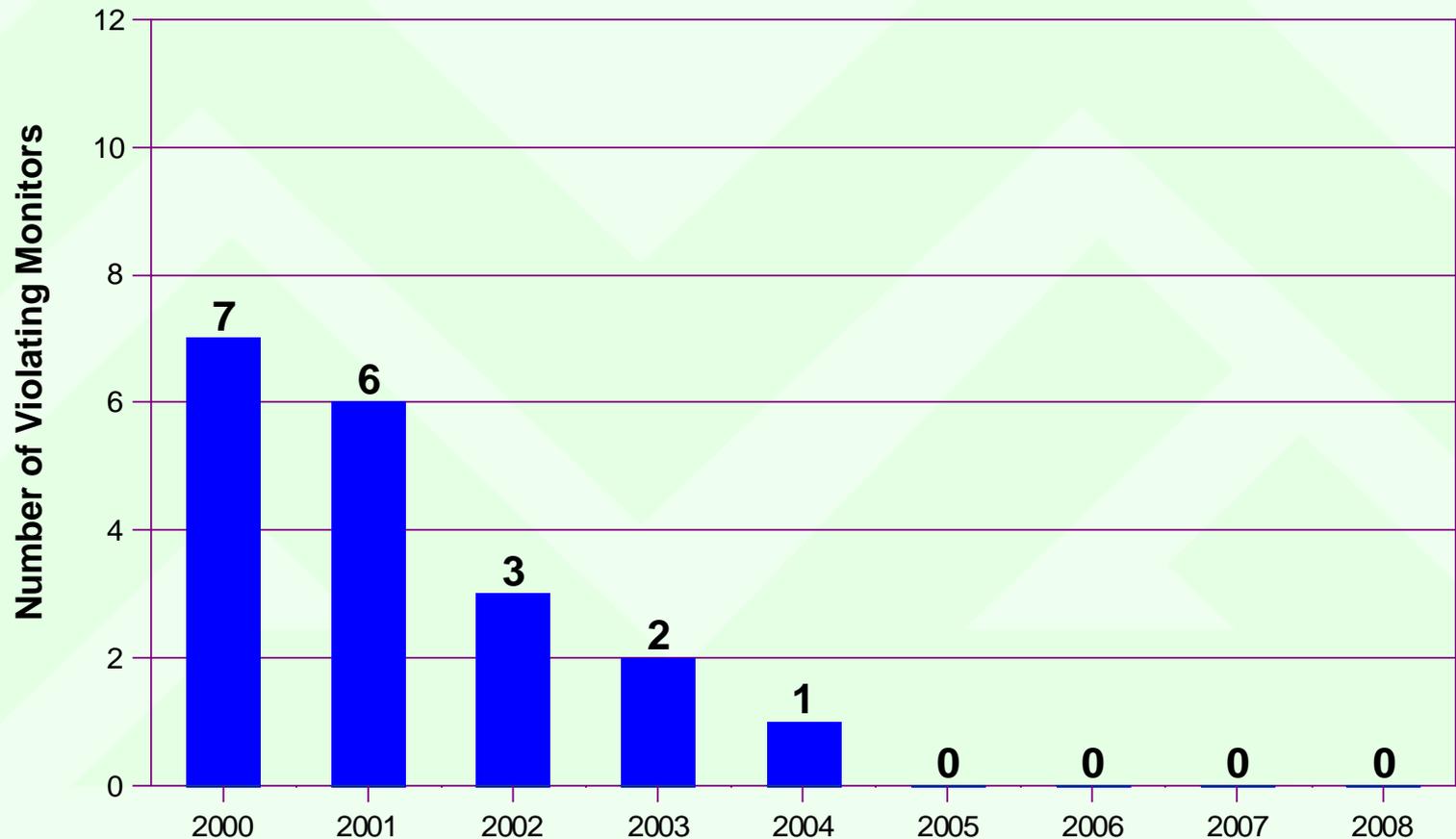


Source: MAG Air Quality Trend Data Based On Maricopa County Air Quality Monitoring Data.



8-Hour Ozone Monitoring Data

Violations of the Eight-Hour Ozone Standard (.08 ppm) in Maricopa Nonattainment Area

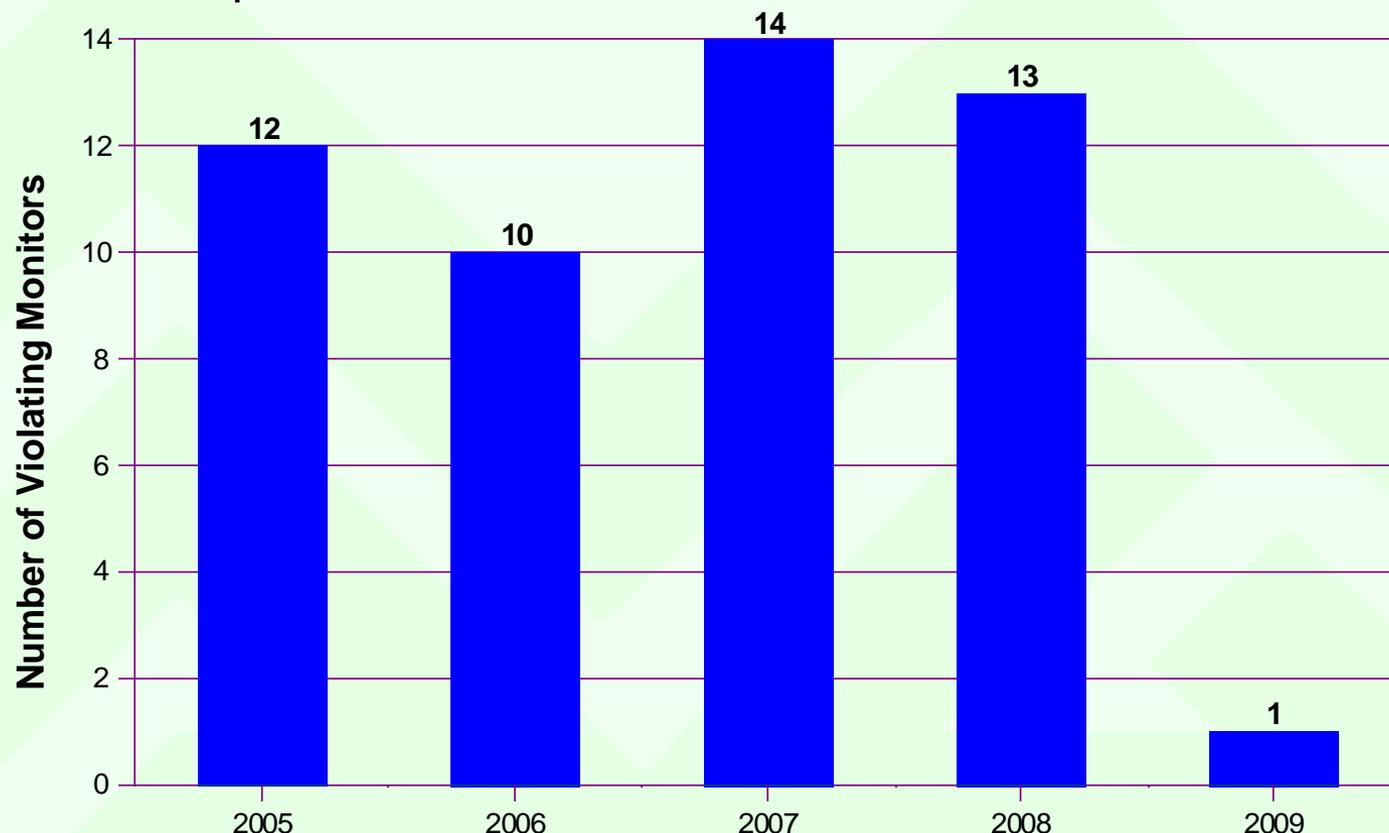


Source: MAG Air Quality Trend Data Based On Maricopa County Air Quality Monitoring Data.



8-Hour Ozone Monitoring Data

Violations of the Eight-Hour Ozone Standard (.075 ppm) in Maricopa Nonattainment Area



Source: MAG Air Quality Trend Data Based On The Maricopa County Air Quality Department; Arizona Department of Environmental Quality; and Environmental Protection Agency

*The 2009 data is based on preliminary data available through August 8, 2009

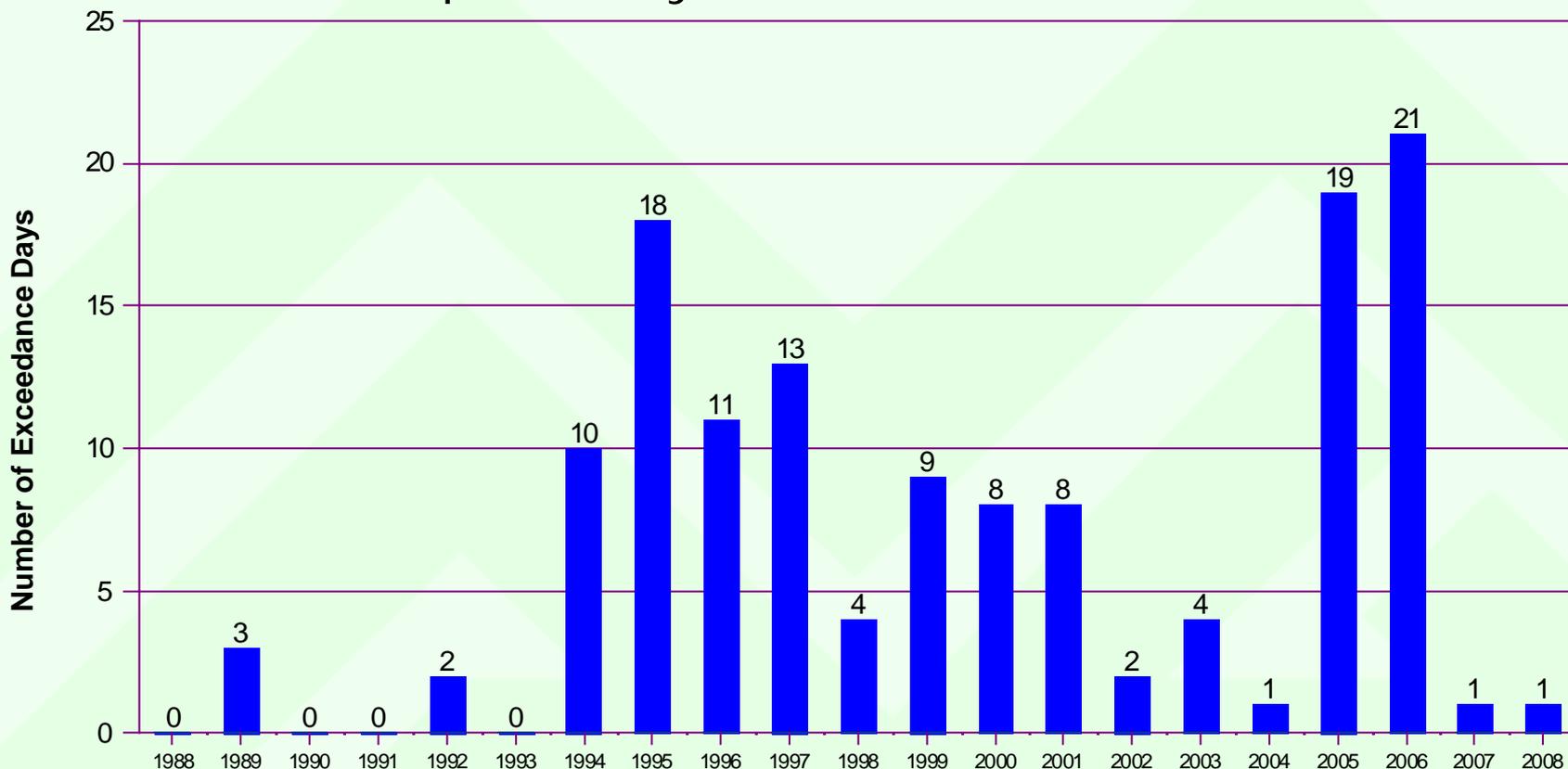
Notes:

1. Includes violations at the Tonto National Monument monitor, which is located just outside the nonattainment area in Gila County.
2. Includes violations at the Queen Valley monitor. On March 12, 2009, the Governor recommended the Eight-Hour Ozone Nonattainment Boundary for the .075 part per million standard to EPA. The new proposed boundary would include the Queen Valley and Combs School monitors located in Pinal County. There were no violations at the Combs School monitor. The EPA will notify states of any modifications to their recommendations by November 12, 2009.



PM-10 Monitoring Data

Days Exceeding the 24-Hour PM-10 Standard in Maricopa County



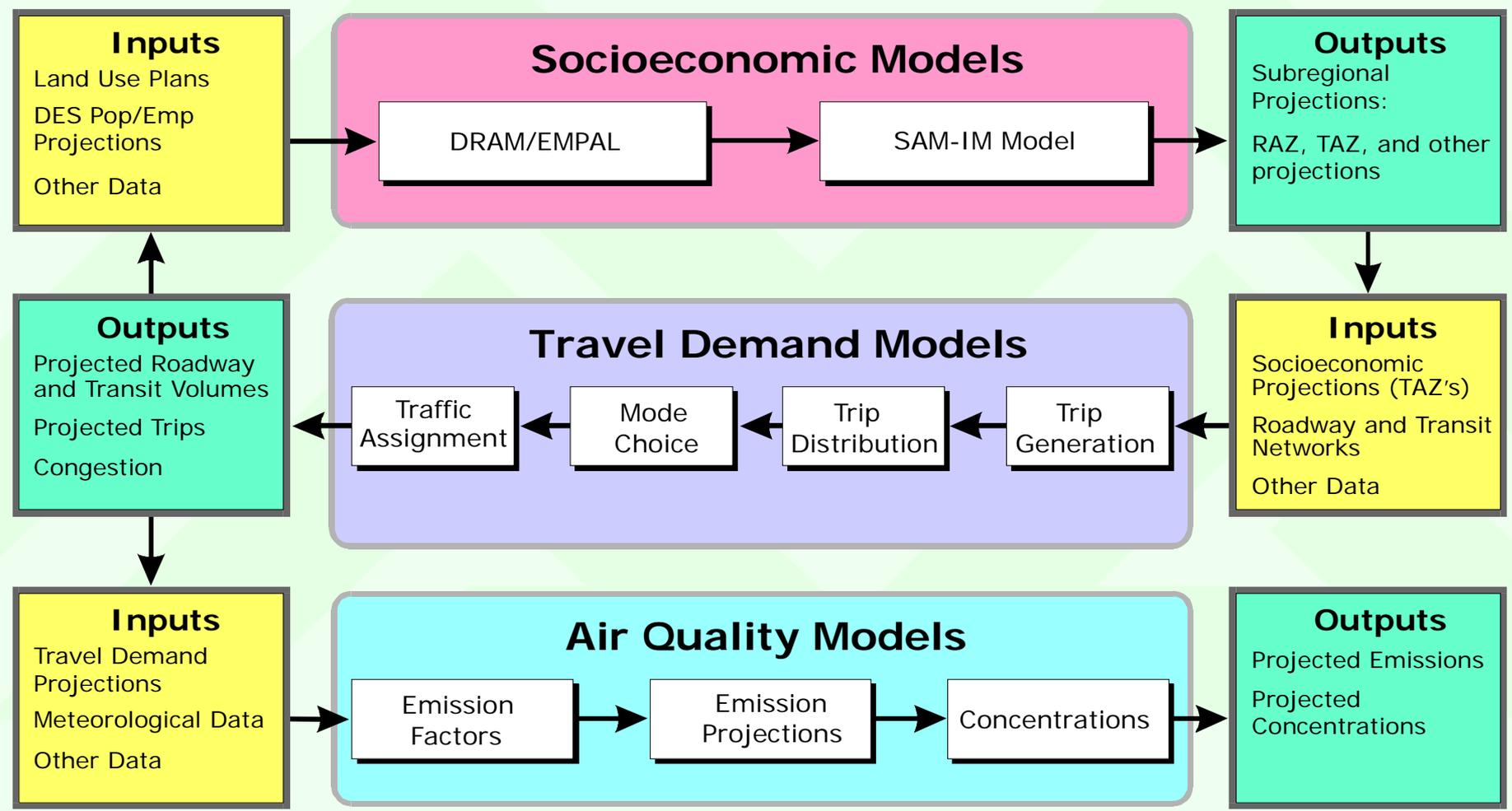
Notes:

1. Exceedance days that are approved or pending approval by EPA as natural or exceptional events have been removed from this chart.
2. Most of the exceedances before 2004 were recorded by filter-based monitors that measured PM-10 concentrations on every sixth day. Since 2004, the filter-based monitors that exceeded the PM-10 standard have been replaced with monitors that measure PM-10 concentrations every day.



Air Quality Modeling is Complex

MAG Model Linkages





Air Quality Modeling is Complex

MAG State of the Art Regional Modeling Tools



Air Quality & Meteorology Models
CO/Ozone/PM-10

Air Quality Emissions Models

CMAQ
CAMx
AERMOD
WRF
MM5

Travel Demand Models

Mobile 6.2
EPS
MOVES

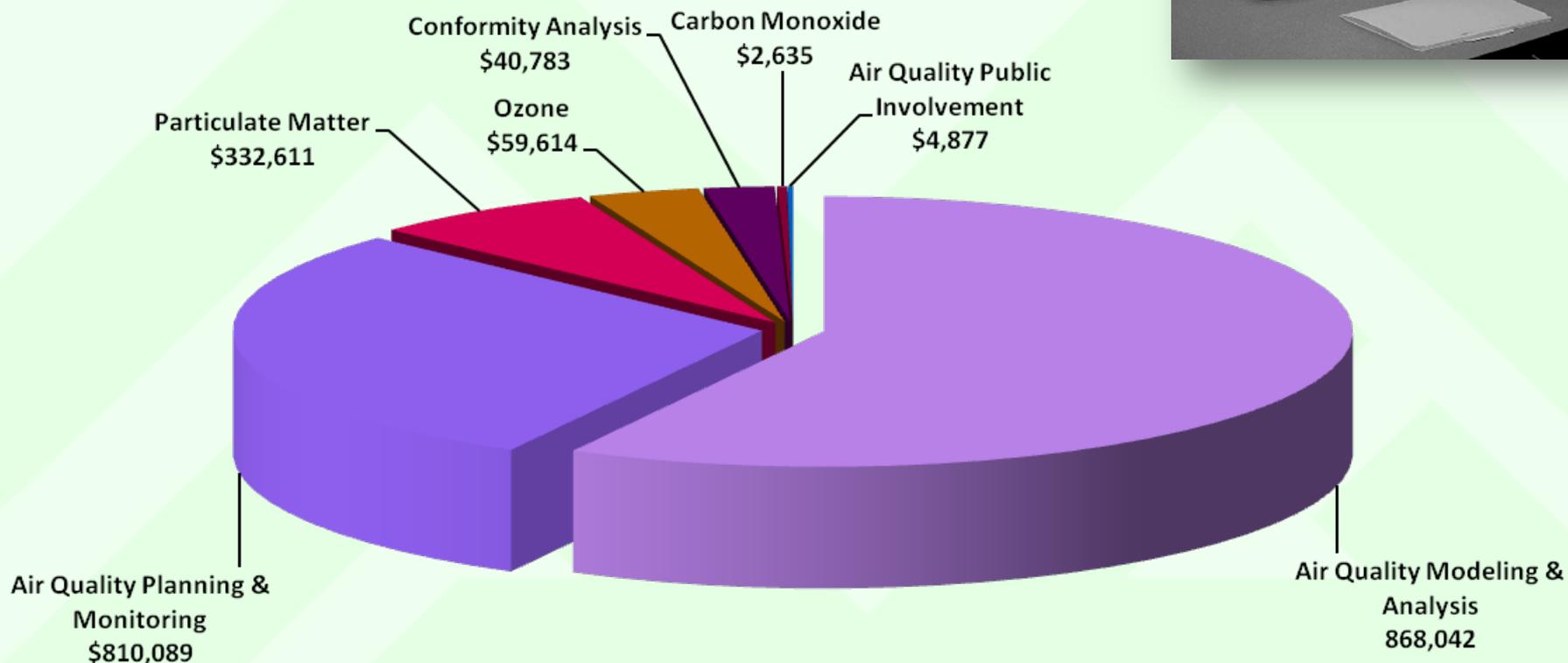
Socioeconomic Projection Models

TransCAD v5.0

DRAM/EMPAL
SAM-IM



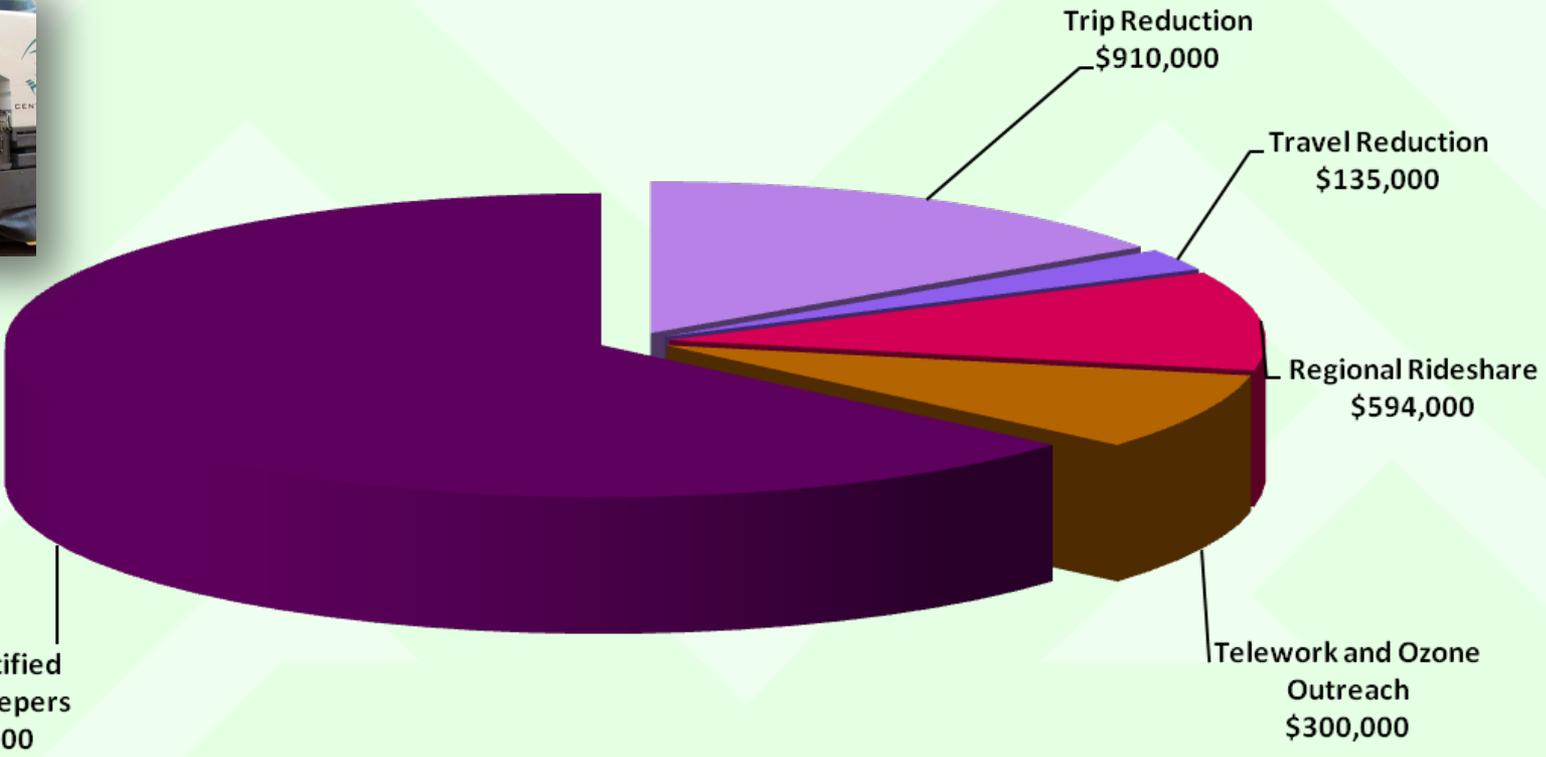
Air Quality Planning FY 2010 Planning Budget



Air Quality Planning Budget Total: \$2,118,651



Air Quality Implementation FY 2010 Budget



Air Quality Implementation Budget Total: \$3,249,000



Recent Air Quality Plans

MAG EIGHT-HOUR OZONE REDESIGNATION REQUEST
AND MAINTENANCE PLAN FOR
THE MARICOPA NONATTAINMENT AREA

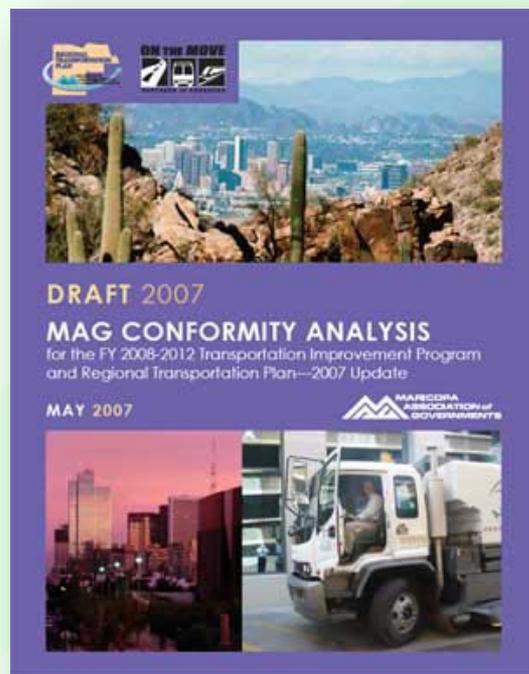
FEBRUARY 2009



- MAG 2007 Five Percent Plan for PM-10
- MAG 2007 Eight-Hour Ozone Plan (.08ppm)
- MAG 2009 Eight-Hour Ozone Redesignation Request and Maintenance Plan (.08ppm)



Air Quality Conformity



- Transportation and air quality are linked
- Clean Air Act requires transportation plans, programs and projects to conform to the purpose of the air quality plans
- Ensures that transportation activities do not cause violations of the air quality standards
- Air quality plans set motor vehicle emissions budgets



Conformity Requirements

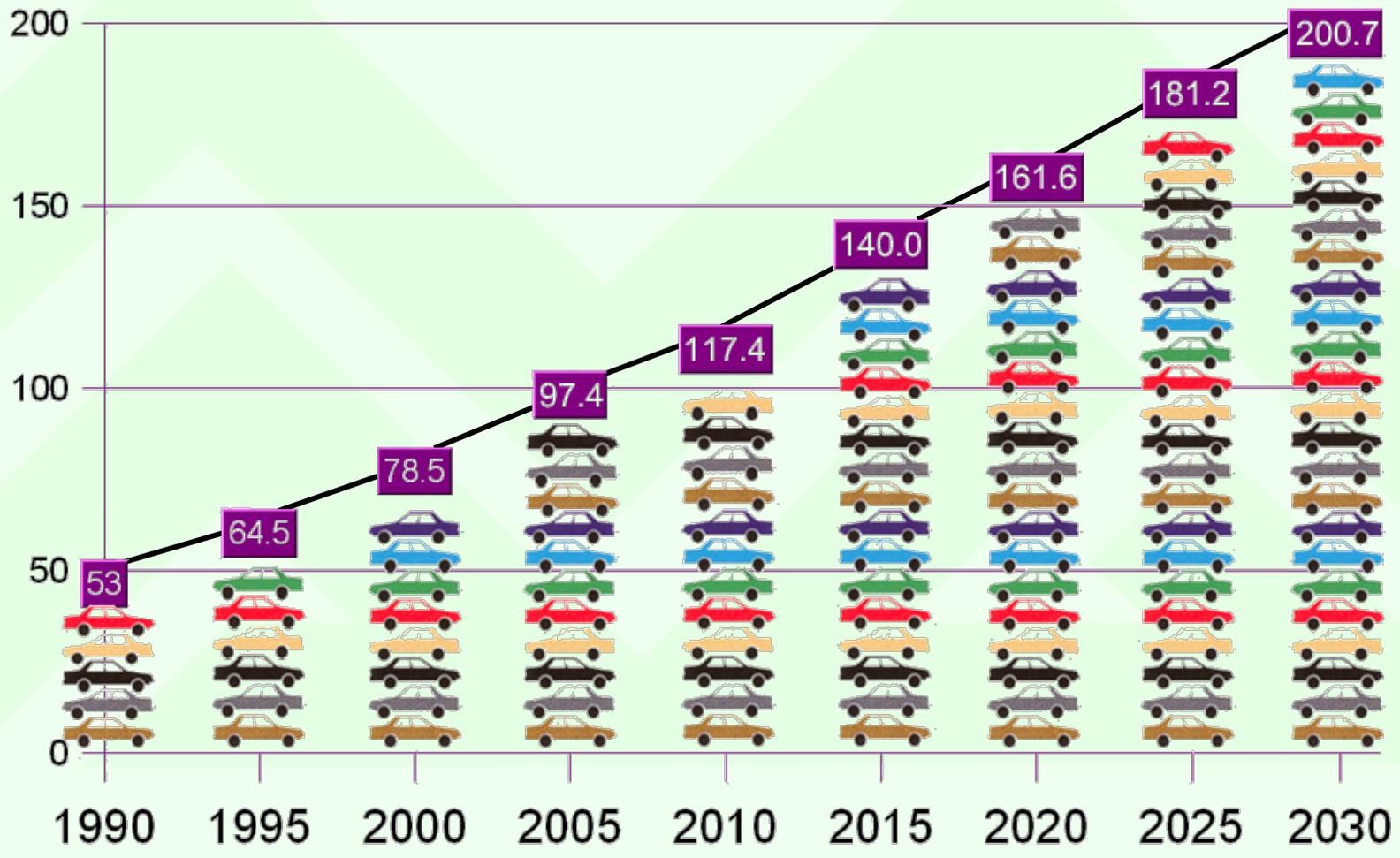


- The Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) must pass the conformity emissions tests
- Latest planning assumptions and emissions models
- Timely implementation of transportation control measures
- Consultation



VMT Growth in MAG Region

(in millions per weekday)



Source: Traffic assignments for the 2007 MAG Conformity Analysis



Key Transportation Control Measures



- Regional Rideshare
- Regional Trip Reduction
- Travel Reduction
- Telework and Ozone Outreach
- Paved Unpaved Roads
- PM-10 Certified Street Sweepers
- Transit
- Park and Ride Lots
- Traffic Flow Improvements
- Bicycle and Pedestrian Projects
- Vanpools



Timely Implementation of Transportation Control Measures

- Each conformity analysis includes a review of TCMs in applicable air quality plans (Chapter 5).
- Agencies with TCM commitments reported that all TCMs in applicable air quality plans are on schedule and there are no obstacles to implementation (December 2004-January 2005).
- TCM implementation in the region has exceeded the commitments in the air quality plans.
 - Many TCMs have been fully implemented for several years.
- TCMs will continue to play an important role in the TIP and RTP for air quality improvement and congestion mitigation.



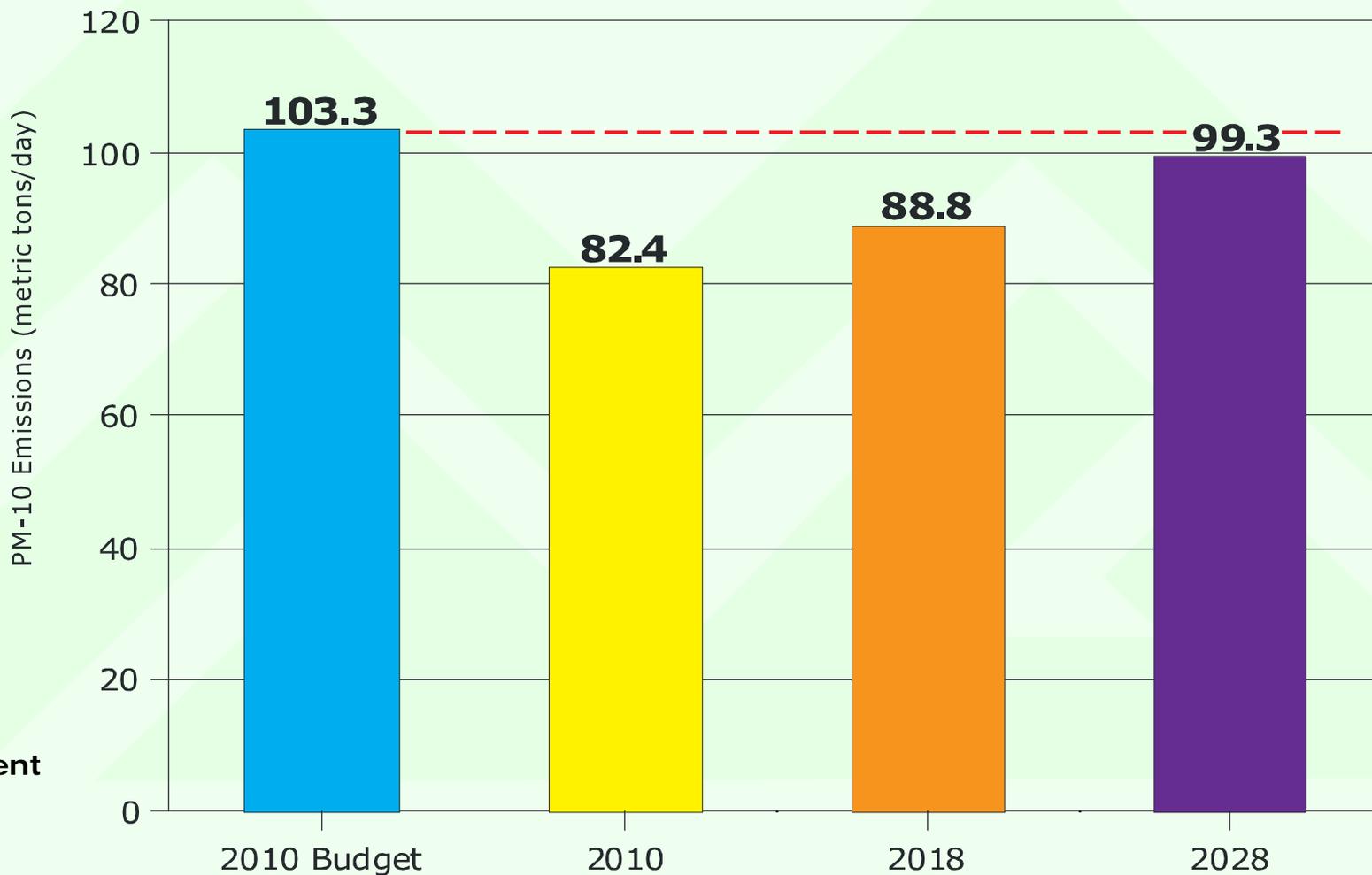
Latest Conformity Findings

- **Conformity Finding for the FY 2008-2012 TIP and RTP 2007 Update-Issued by U.S. DOT on August 16, 2007**
- **Conformity Finding on the Amended FY 2008-2012 TIP and RTP 2007 Update-Issued by U.S. DOT on November 19, 2007**
- **Conformity Finding on the Amended FY 2008-2012 TIP and RTP 2007 Update-Issued by U.S. DOT on August 14, 2008**
- **Conformity Finding on the Amended FY 2008-2012 TIP and RTP 2007 Update-Issued by U.S. DOT on July 16, 2009**



Particulate Matter (PM-10) Results for PM-10 Budget Test*

Annual Average Day Conditions

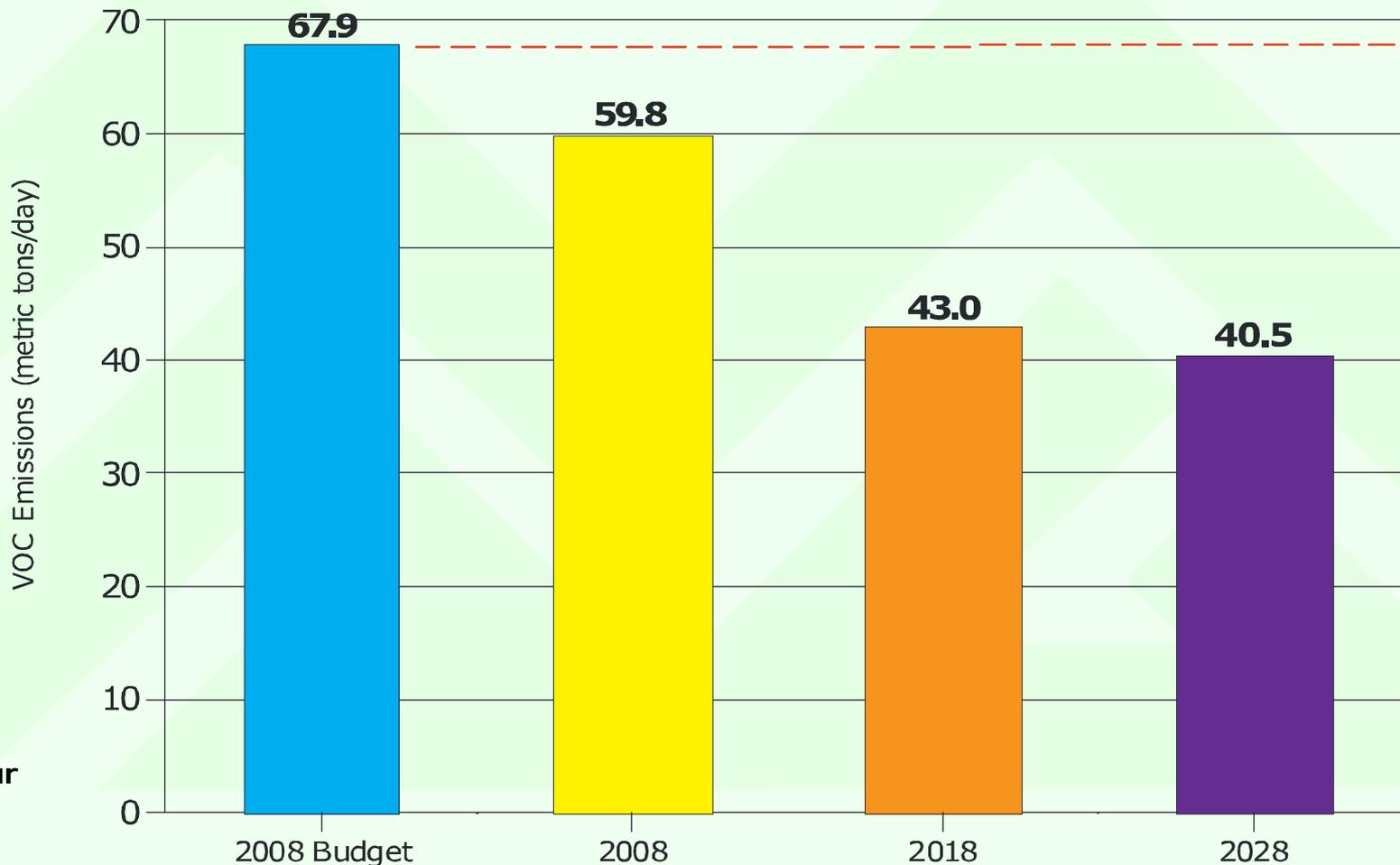


* 2010 budget from the MAG 2007 Five Percent Plan for PM-10.



Volatile Organic Compounds (VOC) Results for Eight-Hour Ozone Budget Test*

Thursday in June Episode Day Conditions



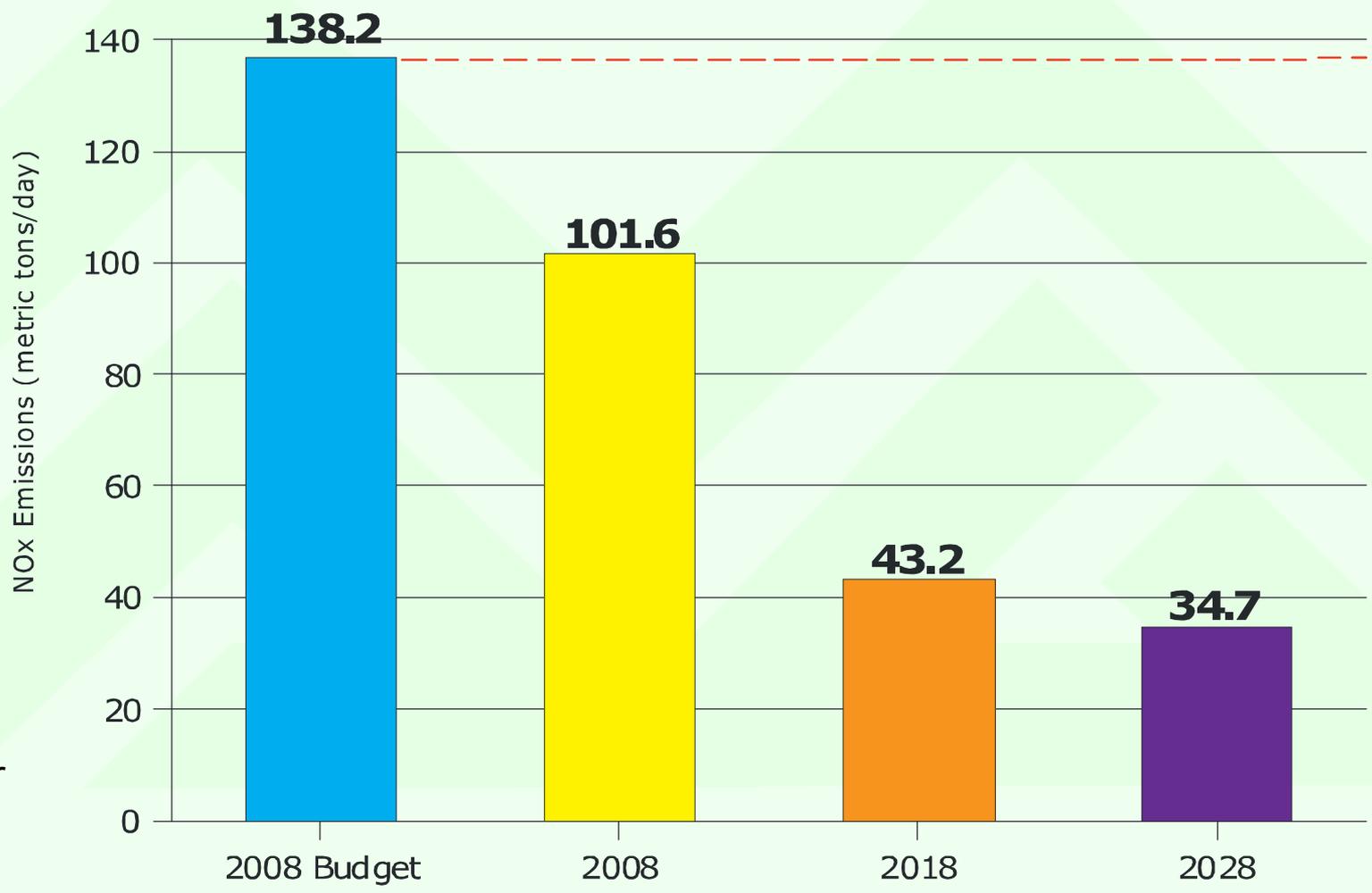
* 2008 budget from the MAG 2007 Eight-Hour Ozone Plan.



Nitrogen Oxides (NOx)

Results for Eight-Hour Ozone Budget Test*

Thursday in June Episode Day Conditions

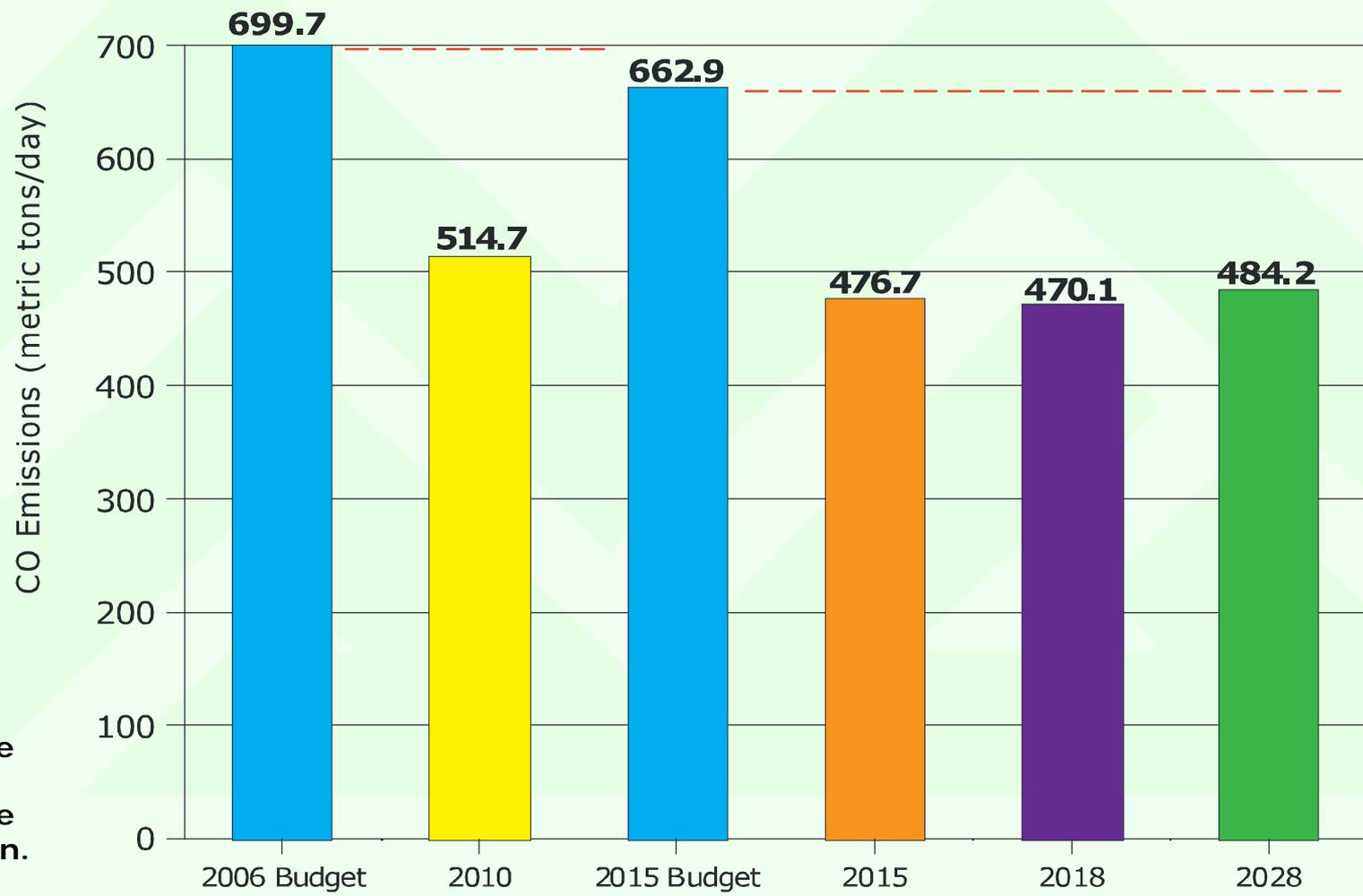


* 2008 budget from the MAG 2007 Eight-Hour Ozone Plan.



Carbon Monoxide (CO) Results for CO Budget Test*

Friday in December Episode Day Conditions



* 2006 and 2015 budgets from the MAG 2003 Carbon Monoxide Maintenance Plan.

For more information

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www.mag.maricopa.gov

