

Maricopa County Air Quality Department

2013 ANNUAL REPORT



Working to provide clean air to Maricopa County residents and visitors so they can live, work and play in a healthy environment



Maricopa County
Air Quality Department

Message from the Director

Another year has passed and from the perspective of our air quality, it has been a busy one. Although we still had dust storms, holiday burning and some ozone exceedance days, 2013 was one of the best air quality years on record with only 21 days exceeding health standards and on six of those days, just one monitor went over the health standard. Compare that to 2012 with 44 days and 2011 with 42 days. That said, we still have our challenges and need to continue to work together to meet the existing and new particulate and ozone standards.

Highlights of the past two years included several Environmental Protection Agency (EPA) actions including approval of our eight-hour, 1997 ozone plan, July 2012 concurrence on Exceptional Events packages in May and September of 2012 and on July 2013. On January 14, 2014 EPA proposed approval of our Five Percent Plan. The latter is a huge accomplishment and reflects years of effort and the continued vigilance of numerous stakeholders and agencies. We all look forward to final approval in 2014.



*William (Bill) D. Wiley, P.E.
Director*

EPA also is offering new challenges with a tougher fine particulate (smoke) standard in December 2012 and its upcoming likely lower ozone standard, when we are not meeting the current 75 ppb standard. We were very close to violating the new particulate standard but with the unprecedented outreach effort of 74 stakeholder groups and agencies, we managed to escape violation for the 2011-2013 averaging period. Thank you to all who participated and those that heeded our “No Burn” day advisories. We all breathe easier.

2013 also brought several enhanced services at the department - A streamlined dust permit (42 pages to 7), online subcontractor registrations and payments, assistance to more than 900 small businesses, 10.1 percent increase in our e-survey response in our Trip Reduction Program, and a highly successful resurrection of the Air Quality conference in November. In addition, the agency continued to improve efficiency while maintaining quality in all of our programs; for example, reducing dust permitting times to less than a day on average (three years ago it took more than 12 days). This work did not go unrecognized and we received five awards this past year including a National Association of Counties (NACo) award (Rule 316 permit manual) and several media awards for our mobile app and Spanish language outreach, including Copper Quill and Public Relations Society of America awards.

2014 brings some real challenges as well as some exciting opportunities. Hopefully our Five Percent Plan will receive final EPA approval and we can start the redesignation process. We will also submit a 2008 ozone plan for the December 2015 attainment date to EPA. Summer always challenges us with dust and high ozone levels and we will need again to be vigilant next winter for woodburning and smoke. On the agency front, you will see enhanced services in many areas, especially with new technologies and online applications.

Thank you for working with us this past year. I am proud of what we have accomplished and energized over the many opportunities to improve our most vital resource – our air.

Table of Contents

DIRECTOR'S MESSAGE	Page 2
ABOUT US	Page 4
FIVE PERCENT PLAN/EXCEPTIONAL EVENTS/AWARDS	Page 5-6
AIR MONITORING	Page 7-8
NO BURN CAMPAIGN	Page 9-10
PERMITTING	Page 11-12
FINANCE	Page 13
COMPLIANCE	Page 14-15
PROCESS IMPROVEMENT	Page 16
PLANNING & ANALYSIS	Page 17-19
TRIP REDUCTION PROGRAM	Page 20-21
SMALL BUSINESS ASSISTANCE/OMBUDSMAN	Page 22
DEPARTMENT OUTREACH	Page 23
CUSTOMER SERVICE	Page 24-25

About Us



The Maricopa County Air Quality Department is a regulatory agency whose goal is to ensure federal clean air standards are achieved and maintained for the residents and visitors of the county. The department is governed by the Maricopa County Board of Supervisors and follows air quality standards set forth by the federal Clean Air Act.

The mission of the Air Quality Department is to provide clean air to Maricopa County residents and visitors so they can live, work and play in a healthy environment.

There are five divisions within the Air Quality Department:

[Air Monitoring](#) oversees the county's 24 stations fixed monitoring network and responds to air quality emergencies.

[Compliance](#) performs site inspections, training and enforcement.

[Permitting](#) issues permits for major/minor sources, including dust and general sources.

[Planning and Analysis](#) is responsible for air quality rules and ordinances, plans, emission inventories, and scientific analysis.

[Trip Reduction](#) manages the county's trip reduction program and administers the voluntary vehicle retrofit program.

Maricopa County has statutory authority (ARS §49-402.B, §49-473 and §49-582) for air quality programs and receives direct approval for its Title V permit program from the Environmental Protection Agency .

The department manages the Clean Air Make More outreach initiative to promote cleaner air and healthier lives. Please visit www.CleanAirMakeMore.com to Make the Commitment and learn more.



We began the New Year with good news. On January 14, 2014, Environmental Protection Agency (EPA) proposed approval of the Maricopa County PM₁₀ Five Percent Plan. If approved, the Five Percent Plan culminates decades of effort¹ to have an acceptable plan to control dust in the Maricopa County nonattainment area. For a full history of the Five Percent Plan see the Arizona Department of Environmental Quality's (ADEQ) Air Quality website on State Implementation Plans at <http://www.azdeq.gov/environ/air/plan/pm-phx.html>. The Five Percent Plan's success was due to many stakeholders and regulators working together on ways to reduce dust and protect the health of the Valley's residents.

The next steps will see the Five Percent Plan go through a 30-day comment period culminating in what we all hope is a full approval by the summer of 2014. Part of that approval is a Clean Data Finding. Once the approval is final, ADEQ and the Maricopa Association of Governments (MAG) will be able to begin the development of a PM₁₀ Maintenance Plan which will include a formal Request for Redesignation to Attainment of the standard. Existing control measures that allowed the area to meet the standard must be moved to this plan and be in place for the next 20 years. The PM₁₀ Maintenance Plan will be reviewed and revised if necessary in the eighth year of the first 10 years of the plan and must contain contingency measures should the area begin to slip back into nonattainment of the standard.

Important milestones that allowed EPA to act on the Five Percent Plan were the approval of several Exceptional Event (EE) demonstrations (e.g. giant dust storms), positive rule effectiveness (RE) analyses for particular rules within the plan and the development of a special Dust Action Permit.

Exceptional Events (EEs)

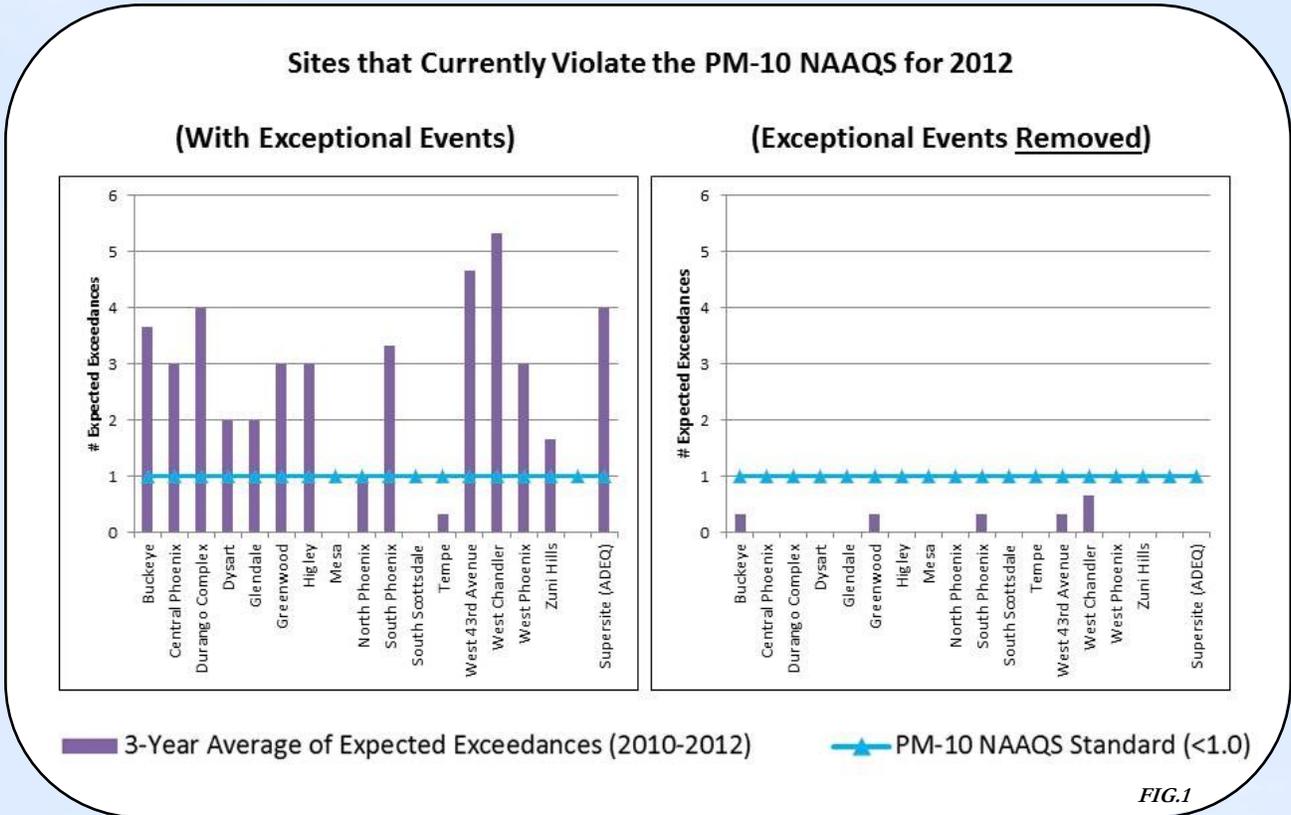
Maricopa County Air Quality's Planning & Analysis Division helped compile 23 EE demonstrations. To date EPA has concurred with 17 of the EE demonstrations for 2011 and 2012. An additional five packages were for 2013 and ADEQ will submit them to EPA in early 2014. Maricopa County Air Quality Department (MCAQD) spent more than 1,500 hours and \$60,000 dollars in its contribution to the EE packages.

EPA's concurrence with the Exceptional Event demonstrations is an important step to obtaining the Clean Data Finding. The work done by MCAQD along with staff from ADEQ and MAG has been included in EPA's recently reissued guidance to be used by other entities in preparing future exceptional event demonstrations.

¹ The area has not met the standard for PM₁₀ (first measured as total suspended particles or TSP) since 1970.

Exceptional Events (continued)

The following graphs show the impact of exceptional events (FIG1). The graph on the left displays the violation status, including dust storm exceedances of our PM₁₀ network. A violation occurs when the three-year average of exceedances is more than one exceedance per year. The graph on the right displays the same information, but exceptional events have been removed. The blue line represents the EPA compliance level.



Awards

In 2013, MCAQD received recognition for several of its programs as it garnered five awards.

The department’s mobile app, the first and currently only county app, notched an American Marketing Association award and a Public Relations Society of America (PRSA) award. MCAQD’s Spanish outreach program earned a PRSA award and an International Association of Business Communicators, Copper Quill award. The MCAQD’s, “Rule 316 Nonmetallic Mineral Processing Handbook,” won a 2013 Achievement Award from the National Association of Counties (NACo). This is the second consecutive year MCAQD has won a NACo award. In 2012 the department was honored for its Rapid Response Program.



The Maricopa County Air Quality Department's (MCAQD) Air Monitoring Division maintains an ambient air monitoring network at 24 fixed sites throughout the county. The network measures six criteria pollutants including carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM_{2.5} and PM₁₀) sulfur dioxide and lead.

This year, the Air Monitoring Division acquired several air quality instruments including a portable Volcanic Organic Compound (VOC) emission camera (FLIR, GF 300). It can visually detect emissions of volatile organic compounds. The camera will allow us to identify sources during inspections on odor complaints. The department can also quickly inspect whole facilities for leaks without interrupting operational processes.

Additionally, the division also operates a Portable FTIR Gas Analyzer, (Gasetm DX4040). This analyzer identifies both organic and inorganic compounds, including Benzene, Styrene, Toluene, Ammonia, Hydrogen Chloride, and Nitrogen Dioxide. These instruments will work in conjunction with one another to find and identify unknown sources of air pollutants.



Gasetm DX4040



FLIR, GF300 Camera

Total Number of Air Pollution Exceedance Days 2009-2013

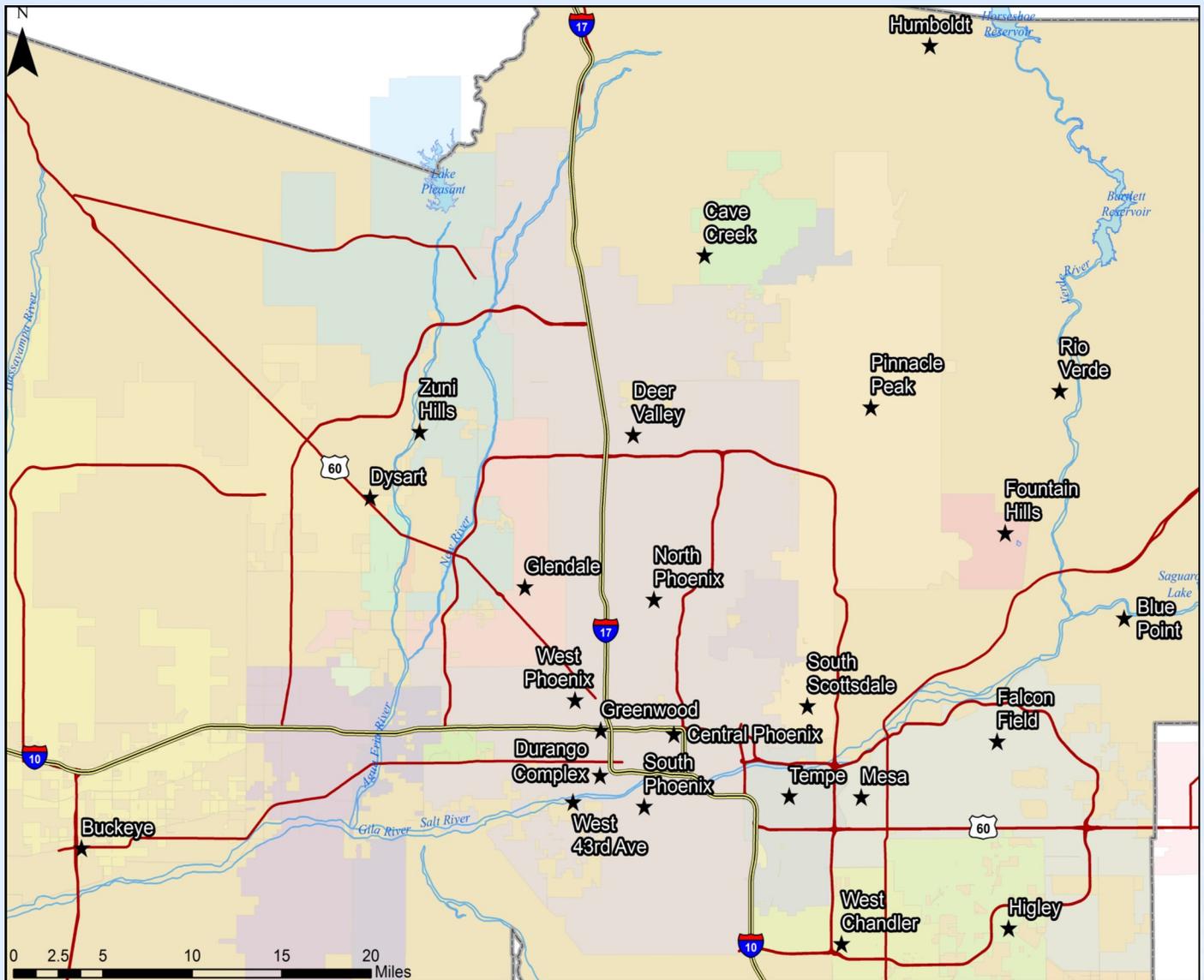
Air Quality Conditions	#Good Days	#Bad Days (Exceedances)
2009	350	15
2010	351	14
2011	323	42
2012	322	44
2013	344	21

*FIG.2**

** Many exceedance days are localized, may be at only 1 or 2 monitors.*

Air Monitoring (continued)

The following map indicates the location of the 24 air monitors in Maricopa County. Click on a specific monitoring site to display the historical trend of its air monitoring data. For each monitor's current data, click on the following link: <http://alert.fcd.maricopa.gov/alert/Google/v3/air.html>



This past winter, Maricopa County Air Quality Department (MCAQD) and the Arizona Department of Environmental Quality (ADEQ) worked together on their largest and most successful No Burn campaign.

This campaign was important because the Environmental Protection Agency (EPA) set a stricter PM_{2.5} health standard. Based on monitoring data from several years it was clear that our PM_{2.5} challenge was due to woodburning during the winter months.

The “No Burn Day? Don’t Burn Wood!” campaign was initiated to combat the county’s PM_{2.5} (smoke) issue during the winter months, help keep our air clean and residents healthy and avoid going into non-attainment for PM_{2.5}.

If the PM_{2.5} problem was not addressed, Maricopa County could have fallen out of attainment with federal health standards, which could mean more burdensome and costly regulations or the potential for the federal government to implement its own plan.

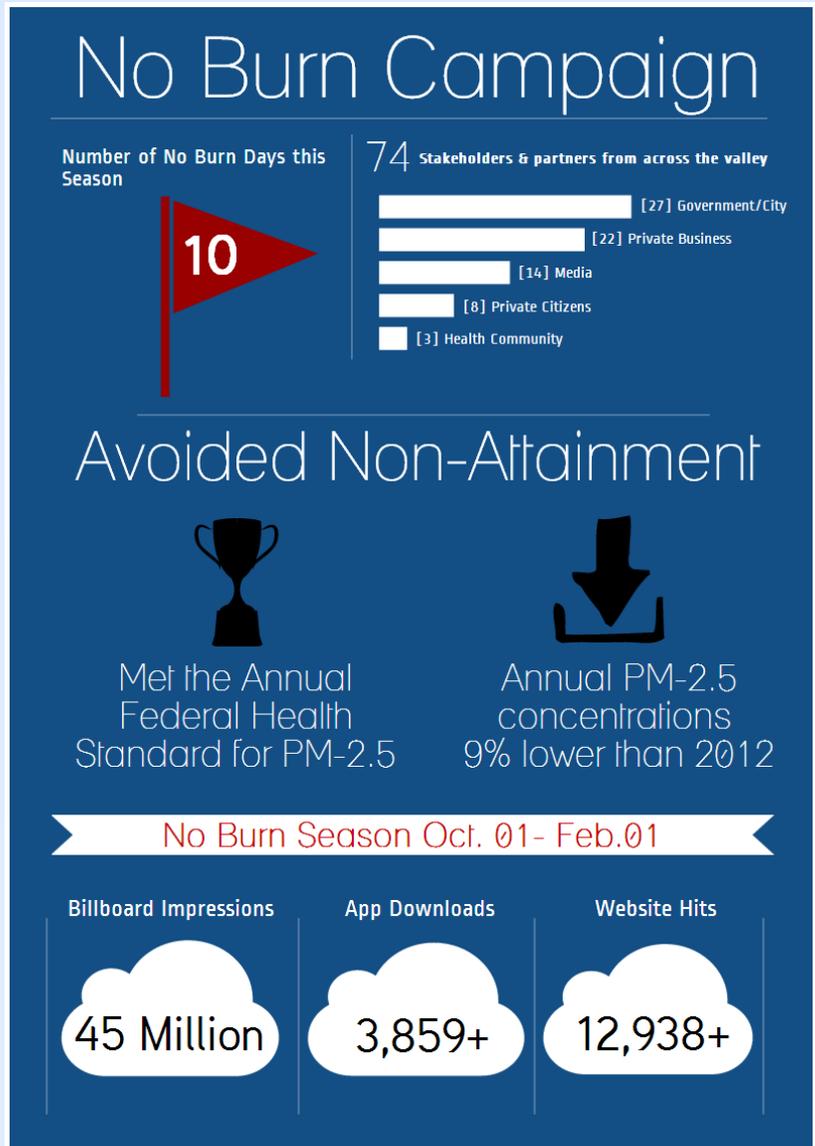
Critical to its success was the need to educate residents about the importance of not burning wood on No Burn days, when the concentration levels are the highest and unhealthiest and weather conditions are the worst.

Woodburning fireplaces and devices are the primary culprits in creating smoke during the winter-holiday season especially when the area has inversion conditions. These conditions pose a serious health threat to children with asthma, the elderly and those with respiratory issues. The particles can be absorbed into the blood stream and decrease lung function, exacerbate bronchitis and asthma and increase chances for heart attacks and premature death.



2013 No Burn Campaign News Conference

Continue on pg. 10



No Burn Campaign (continued)

The campaign, kick off was a news conference at the State Capitol attended by a number of business, public health and municipal officials, included 74 stakeholders and partners from across the valley.

Included in the campaign were approximately 20 billboards, “No Burn day” alerts on Arizona Department of Transportation freeway signs, signs in Bashas’, Food City and AJ’s grocery stores, radio ads and radio and television public service announcements. The campaign also brought the return of the iconic Coughing Camel PSA from the late ‘90s and introduced a new ad with 7’ 4” Basketball Hall of Famer Ralph Sampson.



In conjunction with the No Burn campaign the county increased its enforcement presence. There were 25 percent more inspectors patrolling on No Burn days and a 32 percent increase in the number of violations.

Thanks to the hard work and dedication from our stakeholders the campaign was a tremendous success. The average PM_{2.5} concentration levels were down at six of seven monitoring stations and the county did not violate the annual or 24-hour particulate standard.

MCAQD would like to thank all of the stakeholders who participated in the campaign. Without all of you the campaign would not have been so successful. Also a big thank you to those residents who heeded the No Burn restrictions and did not burn wood on No Burn days.

AJ's Fine Foods	City of Peoria	League of Arizona Cities and Towns
Amanda Reeve, former legislator	City of Phoenix	Maricopa County Department of Public Health
Arizona Asthma Coalition	City of Scottsdale	Maricopa Association of Governments
Arizona Chamber of Commerce and Industry	City of Tempe	Maricopa County
Arizona Department of Transportation	Clear Channel Radio	Maricopa County Environmental Services
Arizona Farm Bureau	David Sanderson, M.D.	Maricopa County Office of Communications
Arizona Food Marketing Alliance	Dobson Ranch Homeowners Association	Maricopa County residents
Arizona General Contractors Association	Food City Supermarkets	National Basketball Retired Players Association
Arizona Hearth, Patio & Barbecue Association	Fountain Hills Times	North Central News
Arizona Lung Association	Friends of Transit	Phoenix Business Journal
Arizona Manufacturers Council	Glendale Ch. 11	Phoenix Ch. 11
Arizona Off-Highway Vehicle Coalition	Governor Jan Brewer's staff	Polsinelli PC
Arizona Republic Newspaper	Haley & Aldrich, Inc.	Ralph Sampson, Hall of Fame Basketball Player
Arizona Restaurant Association	Home Builders Association of Central Arizona	Salt River Project
Arizona Rock Products Association	Honeywell	Salt River, Pima-Maricopa Indian Community
ASU School of Sustainability	Jeff Munn, radio personality	Southwest Gas
Bashas' Supermarkets	John B. Stewart, Chandler Santa	Town of Cave Creek
Bonneville Radio	Johnny Dilone, PIO with Environmental Services	Town of Gilbert
CBS Radio	Judy Johnson, Council Member, Youngstown	Valley Metro
CEMEX	Kiewit	West Valley Newspaper
Child actors who appeared in PSA	KPNX, 12 News	Willo Historic Neighborhood
City of Apache Junction	KTVK, 3TV, AZ Family	Windsor Square Neighborhood Association
City of Avondale	La Prensa Hispana Newspaper	
City of El Mirage	La Voz Newspaper	
City of Glendale	Lamar Advertising Company	
City of Goodyear		
City of Mesa		

The Maricopa County Air Quality Permitting Division is responsible for reviewing applications and issuing permits for Title V, non-Title V, dust and general permits.

A permit is a written authorization for an air emission source to build, install and/or operate equipment that emits air contaminants. The permitting staff write permits that apply controls under air quality rules to protect human health and the environment.

No. of dust permits issued: 2711

No. of NESHAP notifications: 822

No. of subcontractor registrations: 3,210

No. of authorities to operate under general permits: 304
(Total number of ATOs: 2,832)

No. of non-Title V permit actions: 481
(Total number of NTV permits: 1,398)

No. of Title V permit actions: 8
(Total number of TV permits: 31)

Greater Phoenix Economic Council

Due to the regions air quality status, air permitting has critical impact on potential economic development. The department has been working with the Greater Phoenix Economic Council (GPEC) to provide guidance on the permitting process. Presentations to GPEC focused on Maricopa County’s permitting process and how to obtain a permit in the most expeditious manner. The same information was published in the Oct/Nov 2013 issue of the Arizona Journal of Environmental Management.



**GREATER PHOENIX
ECONOMIC COUNCIL**

Performance Testing Improvements

Some air quality permits require performance tests of control equipment to ensure that emission controls work. To reduce backlog in these tests, we conducted Process Improvement efforts in our testing section. The result was the total elimination of the backlog of testing reports to be reviewed. Going forward, test reports, test protocols and data are accepted electronically, reducing review and processing time. Lastly, a database of all testing obligations has been developed to catalog all testing requirements within all air quality permits.

Permits of Interest

There were two noteworthy permits issued during the year. The first Title V permit for a new facility to be issued since 2008 was completed for the Glendale Waste-to-Energy facility. That plant will divert municipal solid waste from the Glendale Landfill and convert the material to synthetic gas to be used to generate electricity. MCAQD also played a pivotal role in bringing the new Apple manufacturing plant to the valley by working with the permit applicant to meet the aggressive timeline needed for the project.

GLENDALE



Permitting (continued)

Permitting Division Manager

In September, 2013, Maricopa County Air Quality Department (MCAQD) promoted Richard Sumner to the position of Permitting Division Manager. In this role, Richard oversees a staff that issues all dust, asbestos and stationary source permits and conducts quality assurance for facilities with performance testing requirements.

With more than 30 years of environmental engineering history, Richard brings a wealth of knowledge gained in the private, public and non-profit sectors. He joined the department in 2008 as a permitting engineer before being promoted to permitting supervisor in 2010.



Prior to coming to MCAQD, Richard served for five years as the Executive Pastor of a large church in Southern California. Richard was born in Missouri and received his engineering degrees from the University of Missouri-Rolla.

Online Services

In 2013, MCAQD continued its effort to improve customer service by accepting Subcontractors' Registration Applications, Dust Control Applications and fees online.

To underscore the need, the department currently has more than 3,000 subcontractors, which register annually and 2,711 applicants for a Dust permit in 2013. By providing online submittal, people can register 24/7 and eliminate a trip to the county offices, which helps keep our air clean.

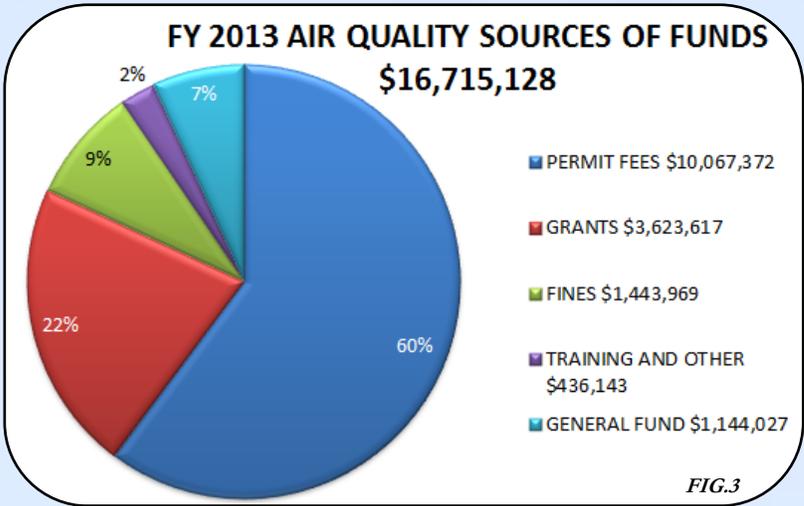
“This is yet another example of how the county can bring private sector principles to government, making the regulatory process more efficient for the taxpayer,” Maricopa County District 2 Supervisor Steve Chucri said. “This is another positive step for the county. We are making it easier to do business in and with Maricopa County. I’m pleased that the Air Quality Department is making the permitting process simpler and more convenient.”



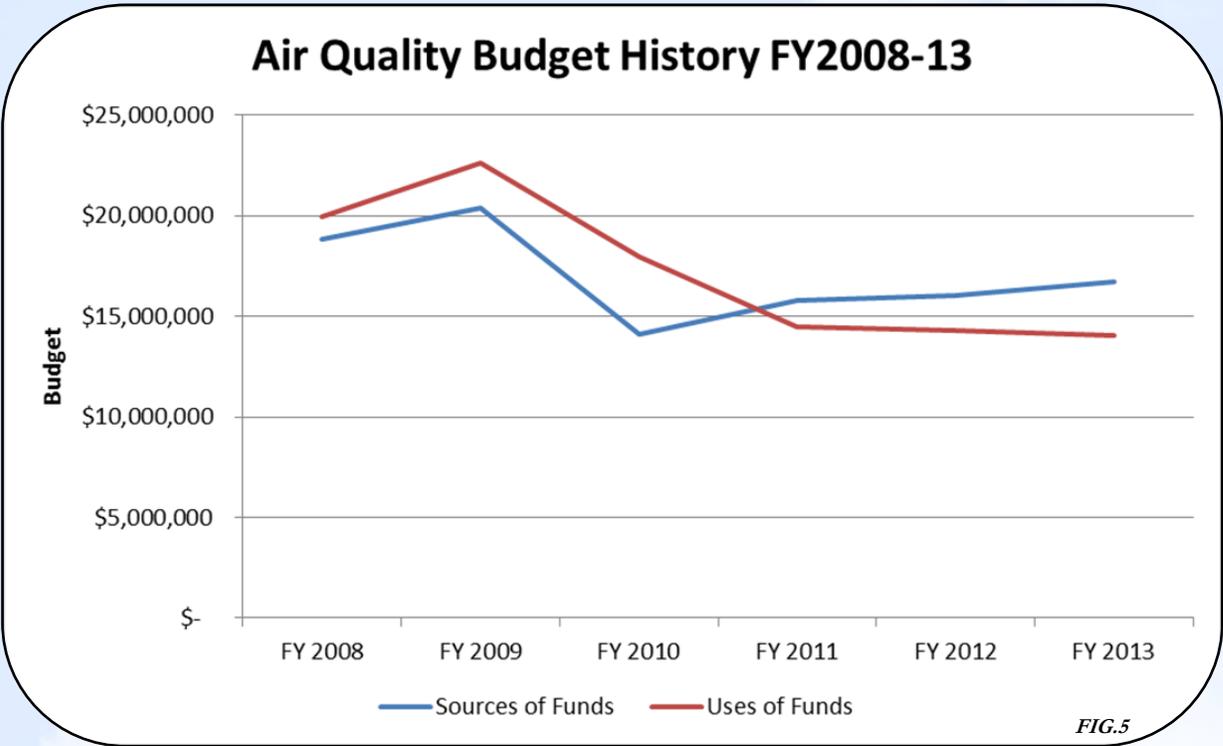
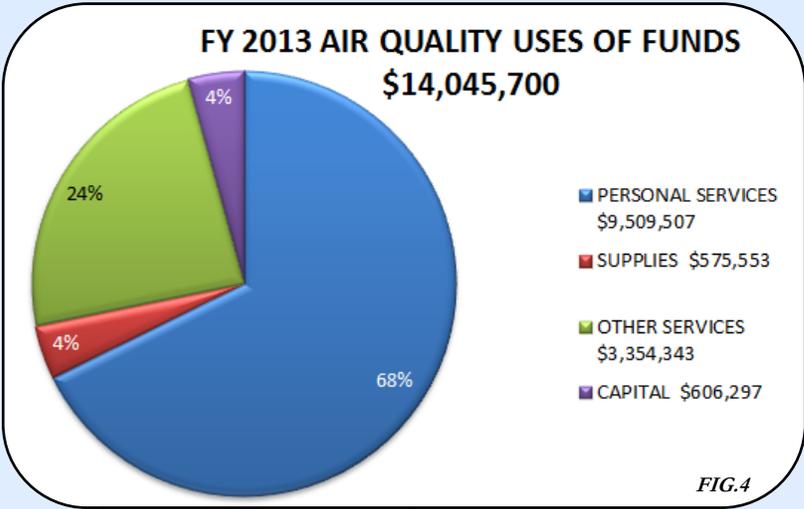
Maricopa County Air Quality Department also simplified its Dust Application form. The previous 42 page document has been consolidated to just seven pages, depending on the type of permit request, making the application more user-friendly. The new application, which must be filled out online, includes drop down menus and pop-up instructions.

From the inception of the new streamlined dust application, on April 19, 2013 to December 31, 2013, 1,281 people used the new application and 327 online applications were processed.

The Maricopa County Air Quality Department is primarily funded by fees and grants, but receives money from other sources, including settlement funds and county General Fund monies. In FY 2013 (July 1, 2012-June 30, 2013), the department continued on a fiscally stable course for the second consecutive year. See budget history graph below (FIG.5).



FY 2013 ended with a positive net difference of \$2,669,428, due to a large enforcement settlement, permit fee revenues above budget, expenses below budget, and grant funding timelines that overlapped the county fiscal year. Fiscal stability was a result of continued financial vigilance and process improvements within the department.



Compliance

Dust Training

Maricopa County Air Quality Department provides dust control training for the following rules: Rule 310, Fugitive Dust from Dust-Generating Operations, and Rule 316, Nonmetallic Mineral Processing. Site superintendents, permit holders, water truck and water pull drivers among others, must attend training. The purpose is to ensure those working in dust-generating operations are aware of air quality regulations and how to prevent problems.

The following chart shows the number of individuals trained in each category in 2013 (FIG.6).

	Rule 310	Rule 316
Basic (in-house)	1,335	96
Comprehensive (in-house)	1,051	108
Basic (off-site; group)	663	-
Comprehensive (off-site; group)	166	-
City/Town Block Permit Basic	363	n/a
Totals:	3,578	204



FIG.6

Inspections

Each year, the department inspects thousands of facilities to ensure compliance with permit conditions and air quality regulations. These facilities range from very large facilities (like power plants) to construction sites which are required to control dust. Our goal is to achieve 100 percent compliance, and when violations occur, to make certain that the violations are addressed in an expeditious and appropriate manner. Once observed, nearly all violations are corrected immediately or within a designated time limit. The following graph shows the number of inspections completed this past year (FIG.7). In calendar year 2013, due to the uptick in economic activity there was an increase in inspection activity, as well as an increase in violations.



Inspections Conducted - 2013	
Rule 310 (Dust):	7,376
Rule 310.01 (Vacant Lot):	7,673
Rule 316 (Rock Mining):	80
Rule 316 Partials:	274
Non-Title V Permits:	786
General Permits:	1986
Title V Permits:	31
Synthetic Minors:	29
Asbestos:	396
Notices of Violation Issued:	1,116
Opportunity to Correct Issued:	1,016
Enforcement Cases:	555
Penalties Received/Committed:	\$744,665

FIG.7

Complaints/Mobile App

Complaints including smoking vehicles, dust and illegal burning are received by the department each day and our goal is to respond to each within 24 hours. There were 4,085 complaints received by the department in 2013 (FIG.8).

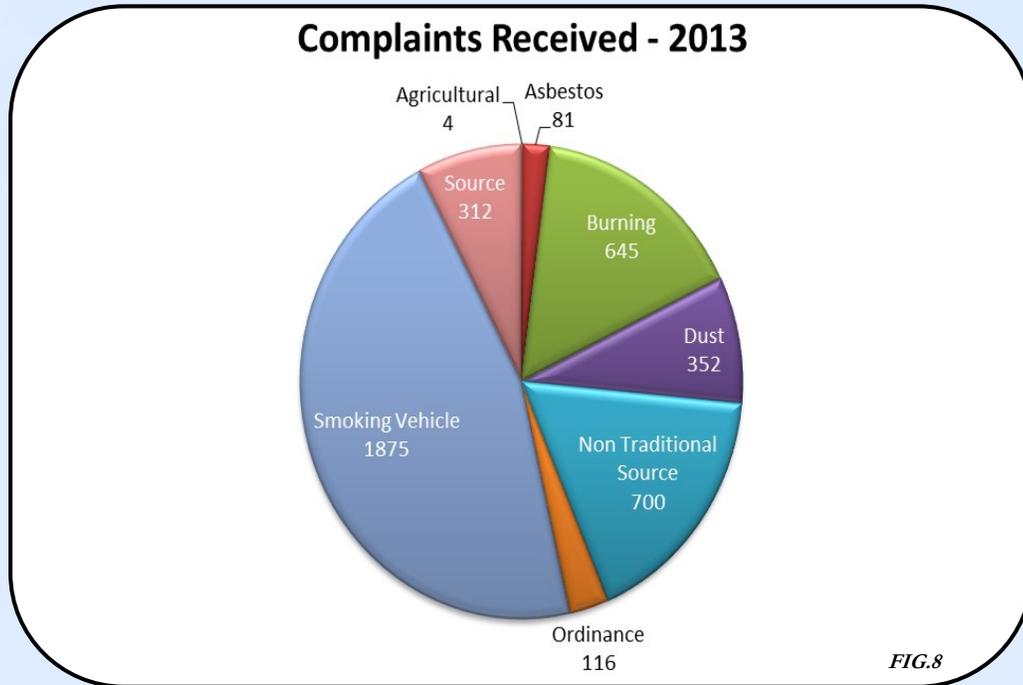


FIG.8

From these complaints, 448 (11 percent) were reported to our department using our Clean Air Make More mobile application. The mobile app, which provides air quality forecasts, air quality restrictions, and the ability to report an air quality violation, has been downloaded more than 10,000 times since its launch in September 2012.

Download the Clean Air Make More App for iPhone, iPad and Android

The Clean Air Make More App provides you with real-time air quality information right on your smartphone or tablet.

Get real-time information about air quality in Maricopa County along with alerts about High Pollution Advisories, Health Watches and restrictions for activities such as woodburning, leaf blowing, and off-highway vehicle use.

more
INFO

 CleanAirMakeMore.com/app

Process Improvement

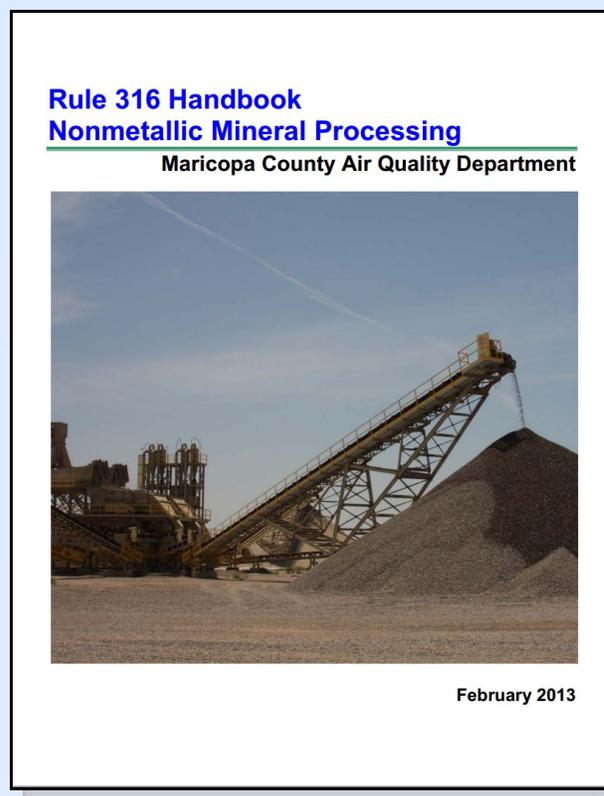
New Dust Compliance Tool Available Online

After an extensive, collaborative effort between the Maricopa County Air Quality Department (MCAQD) and the Arizona Rock Products Association (ARPA) a new dust control guide was made available in February of 2013.

The Rule 316 Nonmetallic Mineral Processing Handbook is designed to provide a comprehensive overview of the department's Rule 316, which establishes standards for industry dust control.

The 58-page guide is designed to give companies in the rock products industry an easy-to-use roadmap with pictures to promote compliance with dust control regulations and which help keep our air clean.

The handbook offers helpful guidance for the most commonly encountered compliance challenges in the rock products industry.



“This handbook will provide a much needed resource to better understand companies’ obligations and help achieve full compliance,” ARPA Executive Director Steve Trussell said. “This opportunity to develop the handbook in conjunction with Maricopa County Air Quality Department and representatives from the association’s 38 aggregate producing members shows that both entities are committed to improving our air quality.”

The Rule 316 handbook is the second dust handbook Maricopa County Air Quality has produced. The Dust Abatement Handbook for Compliance with Rule 310-Fugitive Dust from Dust-Generating Operations and accompanying Field Guide was issued March 2010.

The department’s “Rule 316 Nonmetallic Mineral Processing Handbook” won a 2013 Achievement Award from the National Association of Counties (NACo). This is the second consecutive year MCAQD has earned a NACo award. The NACo annual Achievement Award Program, which began in 1970, recognizes innovative, progressive and creative county government programs.

The 316 Rule Handbook is available on the departments' website at: <http://1.usa.gov/Z34zpG>.

Interested businesses may direct questions about the Rule 316 handbook to the department’s Small Business Assistance Manager Ken Hooker at (602) 506-5102.

Rulemakings

In January, 2013, Maricopa County launched a new website for all county rulemakings. The website is called “Building Relationships” and is part of the Enhanced Regulatory Outreach Program (EROP). EROP is designed to promote consistency and transparency among regulatory departments and the public and includes three rulemaking options. Two of the rulemaking options, Expedited and Incorporation By Reference, are more streamlined than the conventional rulemaking process but still allow multiple opportunities for stakeholder input. The Air Quality EROP webpage can be found at

<http://www.maricopa.gov/regulations/aq/process.aspx>.

The Maricopa County Board of Supervisors, in May, 2013, adopted a moratorium on increased regulatory burdens. Consequently, all county departments are prohibited from initiating any rules unless such rules lessen or ease a regulatory burden, prevent an immediate or significant threat to public health, avoid a violation of a court order or federal law, comply with a federal or state statutory requirement, or adjust fees to provide adequate, timely, or required services. To date, Maricopa County Air Quality Department has obtained approval from the County Manager so that current rulemakings meet the moratorium exemptions.

The following dashboard shows the rules currently in the rulemaking process as of March 1, 2014 and their status (FIG.9). In the upcoming year the dashboard will be more interactive with drop-down menus that explain each step. The dashboard will be posted to the MCAQD website so stakeholders can view each rule’s progress in a quick visual manner.

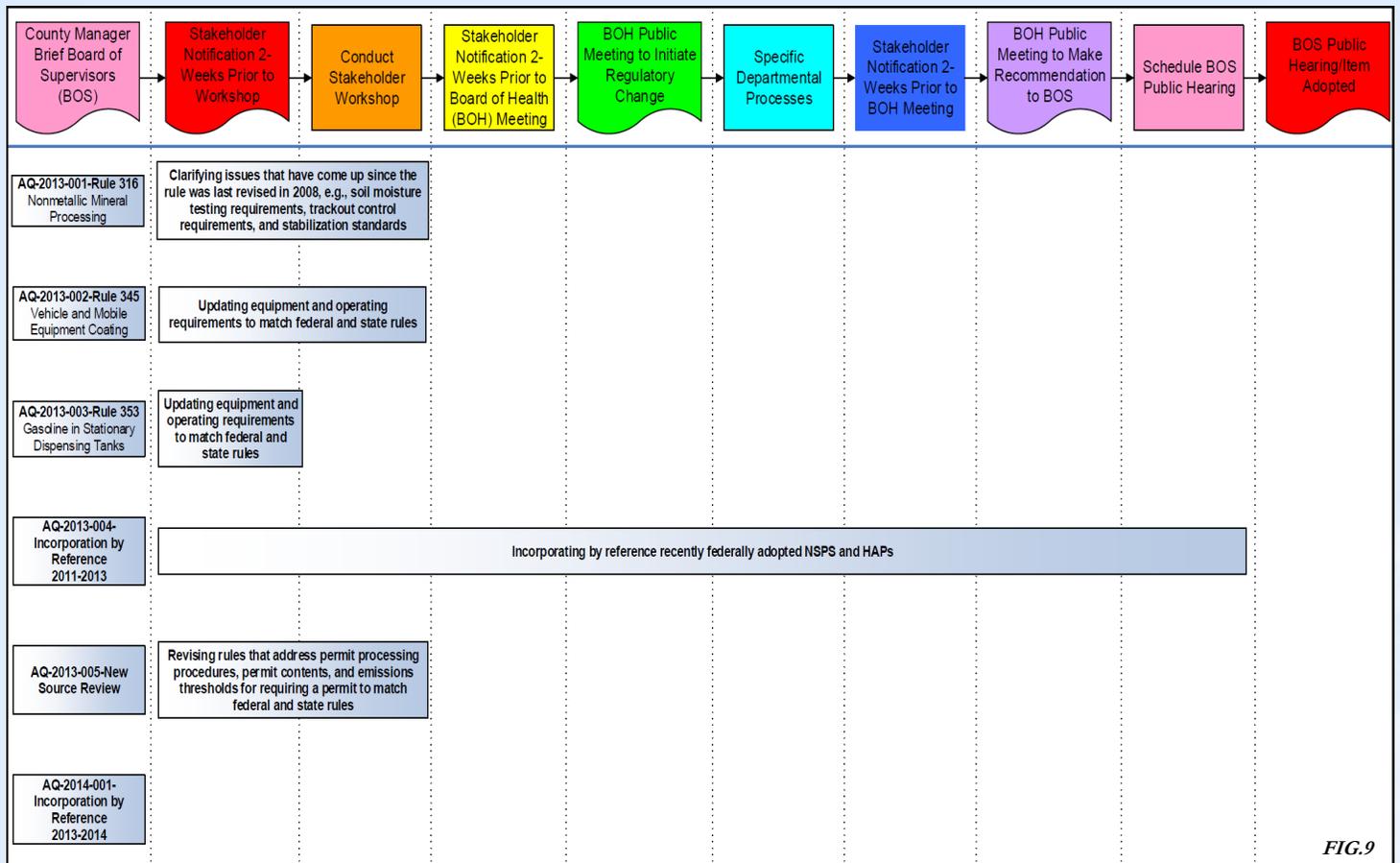


FIG.9

Planning & Analysis (continued)

Rule Effectiveness

During 2012, the Planning & Analysis Division completed rule effectiveness studies for three county rules designed to control PM₁₀ emissions. Rule effectiveness is a methodology developed by EPA to determine if rules designed to reduce emissions are, in fact, meeting emission reduction targets. Rule effectiveness calculates the percent of compliance with emission based requirements. The method involves four steps: (1) define the parameters of the study (in this case three rules which address PM₁₀ emissions for the Maricopa County Five Percent Plan); (2) identify emission sources; (3) identify relevant inspections; and (4) identify violations.

As seen in the graph below, Rule 310 (Fugitive Dust from Dust-Generating Operations), Rule 310.01 (Fugitive Dust from Non-Traditional Sources of Fugitive Dust; e.g., vacant lots), and Rule 316 (Non-Metallic Mineral Processing) show increased effectiveness over time (FIG.10). The overall rule effectiveness exceeded the expected reduction projected in the Five Percent Plan, resulting in actual reduction of 16,190 tons of PM₁₀.

Rule Effectiveness Over Time

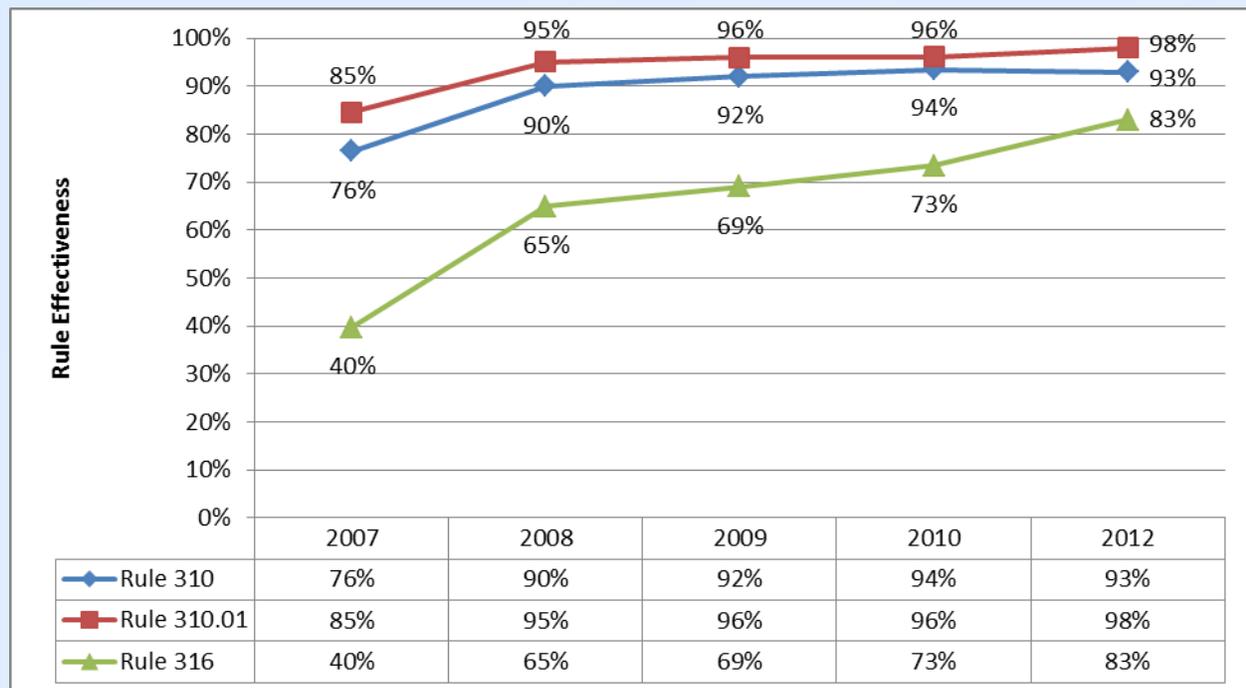


FIG.10

In the upcoming year Maricopa County Air Quality’s Planning & Analysis Division will conduct additional rule effectiveness studies for rules that reduce emissions that contribute to ozone.

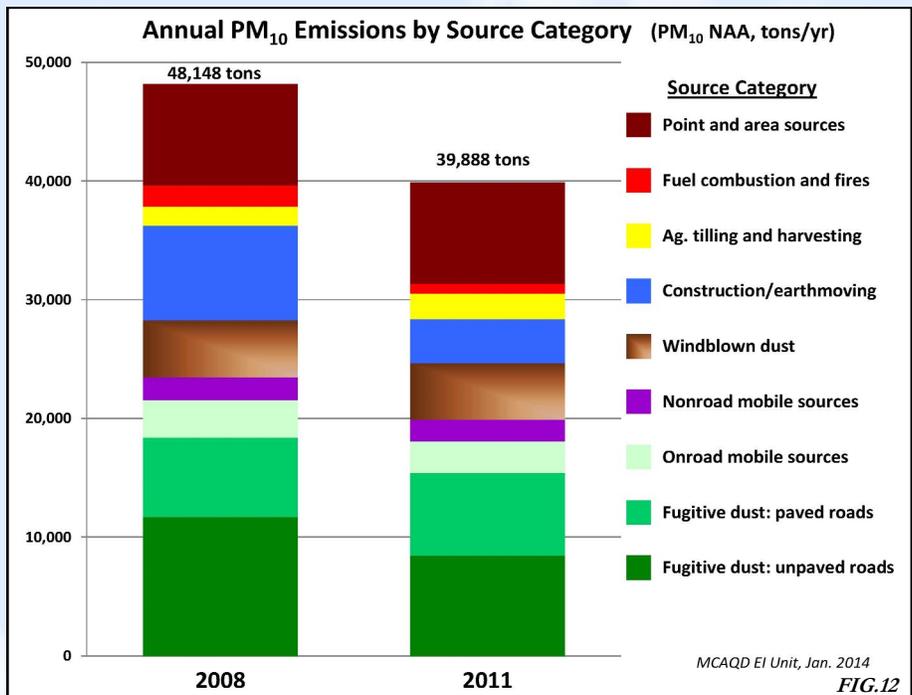
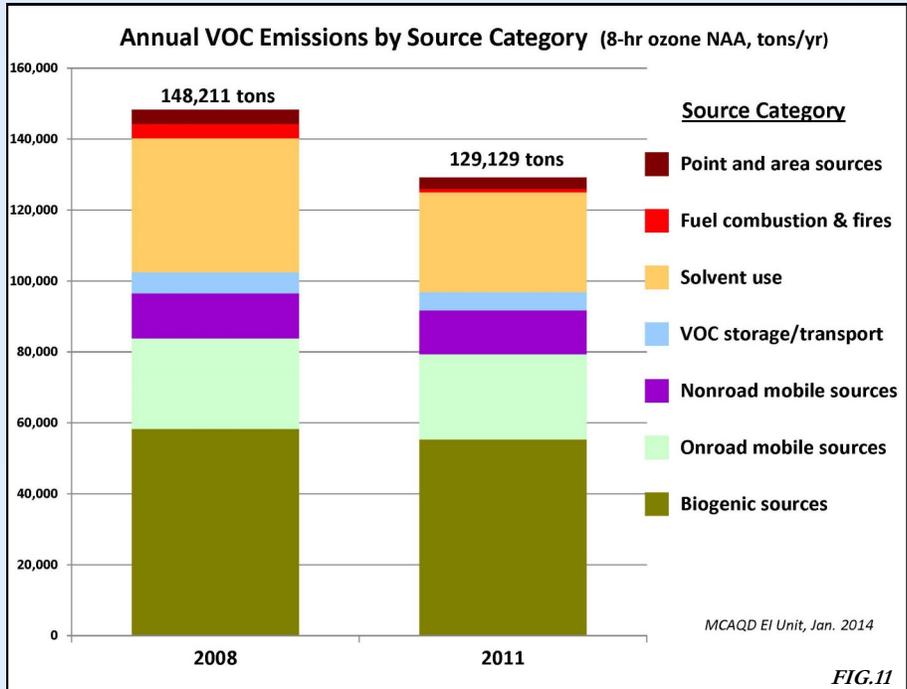
Emissions Inventories

In January, 2014, the Emissions Inventory (EI) Unit of MCAQD sent out approximately 500 surveys requesting detailed 2013 emissions information from permitted facilities, and will conduct three workshops to assist regulated sources to complete the survey. These surveys help assess sources' compliance with permit conditions, and contribute to the development of comprehensive, area-wide emissions inventories for air quality plans.

Comprehensive Periodic Emissions Inventories are also prepared every three years, as required by the Clean Air Act. During 2013, MCAQD compiled emissions inventories for 2011, the most recent periodic emissions reporting year. Reports for the 2011 Periodic Emissions Inventories, one for PM₁₀ and one for Ozone, are now available to the public online. The PM₁₀ Periodic Inventory report covers sources that emit PM₁₀, PM_{2.5}, NO_x, SO_x, and NH₃. The Ozone Precursors Periodic Inventory addresses sources that emit the ozone precursors VOC, NO_x, and CO.

As shown in FIG. 11 and 12, overall emissions have declined since 2008 in a number of source categories; e.g., VOC from solvent use and PM₁₀ from construction. Biogenic emissions (emissions from vegetation) remain a large part of total ozone inventory at 43 percent, and could be a subject of further study.

When a State Implementation Plan (SIP) is developed, the relevant emissions inventories are included. For example, the 2011 Periodic Emissions Inventory for Ozone Precursors will become a part of the 2008 8-Hour Ozone Marginal Nonattainment Area Plan developed by the Maricopa Association of Governments and submitted by the Arizona Department of Environmental Quality and our department by July 2014.



Trip Reduction Program

The Maricopa County Trip Reduction Program (TRP) reduces air pollution and traffic congestion by encouraging employers to utilize alternative modes of transportation, such as carpooling, vanpooling and taking the bus. It also supports light rail, bicycling, walking, use of alternative fueled vehicles, compressed work schedules and telecommuting. TRP provides assistance to employers and schools with driving-age students to meet compliance requirements (all employers with more than 50 employees must participate).

The Maricopa Association of Governments (MAG) has estimated that we drive nearly 80 million miles each day in our region. By 2030, MAG projects the daily miles will grow to about 140 million. Despite the use of cleaner vehicles and fuels, due to this growth, vehicles will continue to be a major source of air pollution; including carbon monoxide (CO), volatile organic compounds (VOC) and nitrogen oxides (NOx). The equation below shows the percentage of each pollutant in a lb. of pollution from the average vehicle.

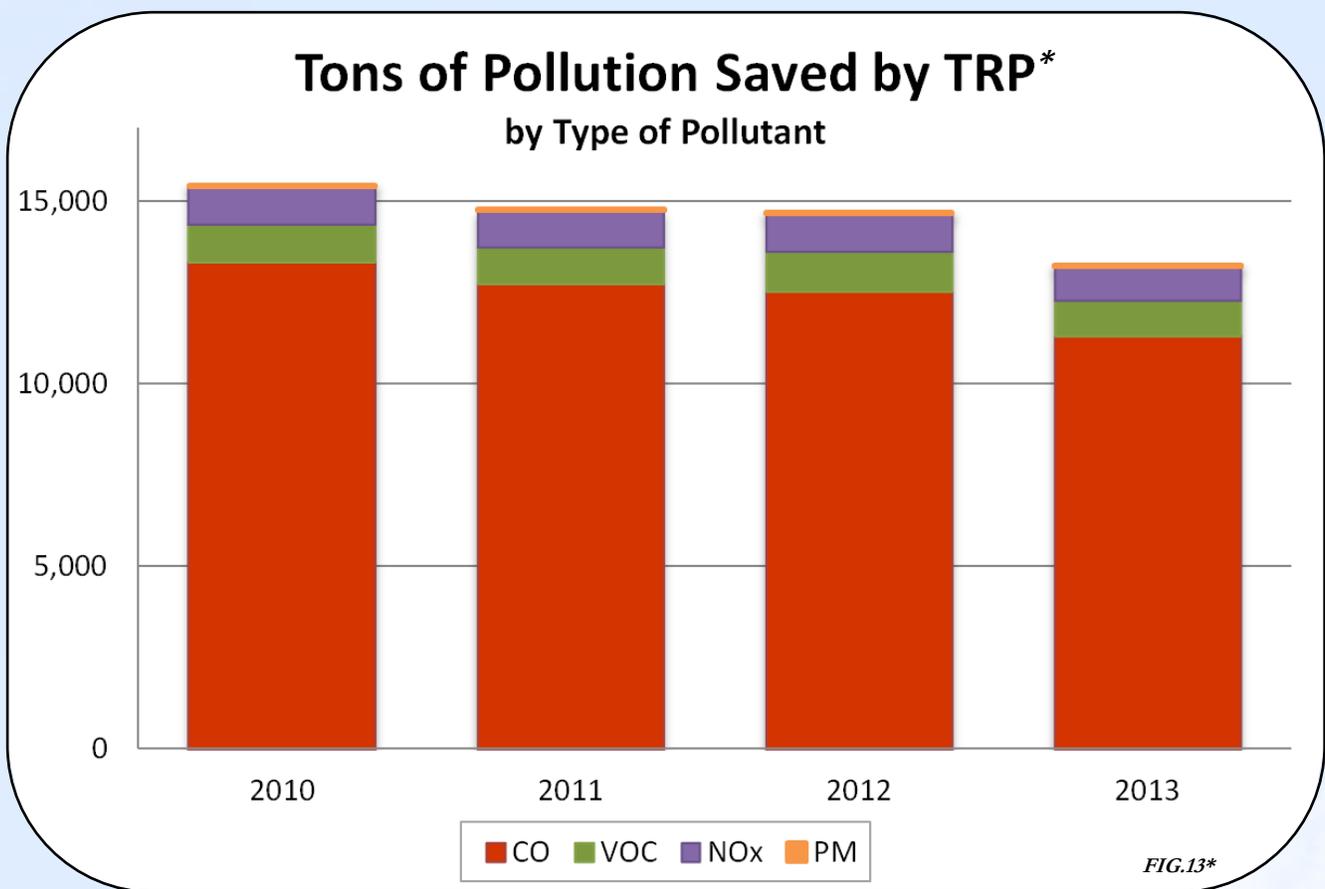


FIG. 13 -Tons of pollution saved by all TRP commuters based on calculations using annual emission factors estimated using EPA’s MOBILE6.2 model.

$$\begin{array}{ccccccc}
 \text{VOC} & + & \text{NOx} & + & \text{CO} & + & \text{PM} & = & 1 \text{ lb. of pollution}^* \\
 7.41\% & & 6.87\% & & 85.67\% & & 0.05\% & &
 \end{array}$$

* The methodology used to calculate commuter alternative mode use influences pollution saving results. Some of the contributing factors impacting pollution savings include a progressively cleaner regional fleet of vehicles, cleaner fuels, commute distance and mode choice. In FY2013 the regional miles/pound factor increased from 48.7 to 49.6 miles traveled to produce one pound of pollution. For reference, in FY2010 the regional miles/pound factor was from 45.5 miles to produce one pound of pollution.

In FY 2013, the Trip Reduction Program:

- Served 1,174 employers at 2,965 work and school sites
- Administered the annual survey to 693,396 employees and driving-aged students
- Increased use of the e-survey by 10.1 percent, saving numerous resources
- Reduced daily commuting by 4,472,276 miles*
- Saved 13,219 tons of pollution (49.6 miles/lb.)

* All calculations are based on a commuter's round-trip to/from a worksite or school.

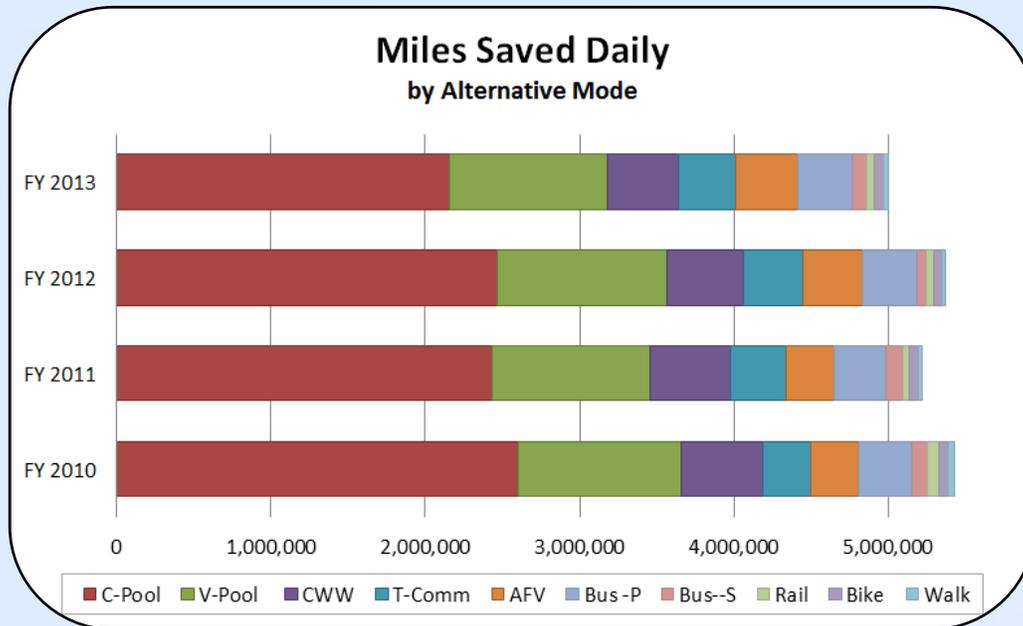


FIG.14

FIG. 14 - Miles saved daily by all TRP participants who returned a valid annual survey.

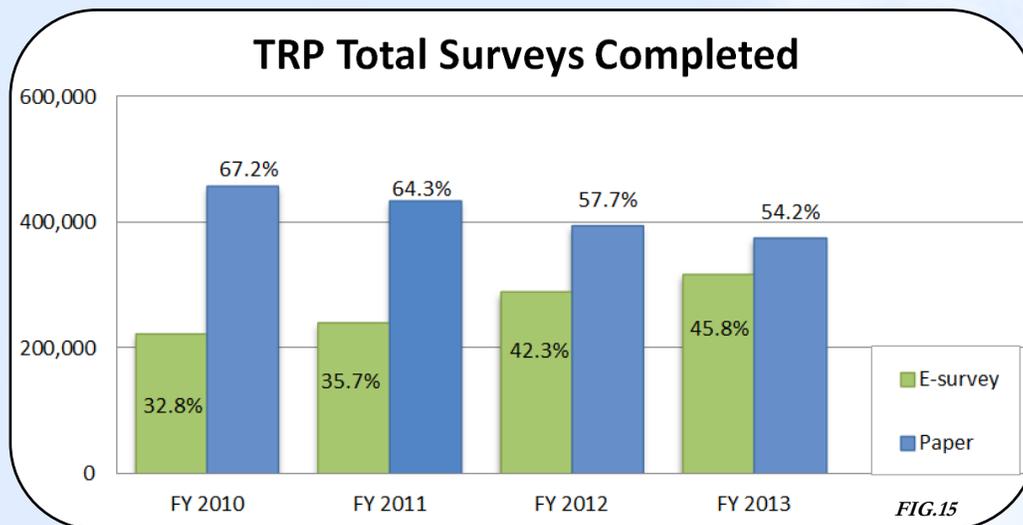


FIG.15

FIG. 15 - Total number of valid surveys returned by TRP participants annually.

Note: The charts above reflect information from 2013 TRP survey response data.

Small Business Assistance/Ombudsman

Small Business Assistance

The Small Business Assistance Office (SBA) provides small business owners information and technical assistance on the county's air quality rules and holds bimonthly permit open houses.

In 2013, the SBA had a total of 917 contacts with the regulated community and general public. These contacts range from a simple one minute phone call to courtesy inspections or issues of more complexity. The graph on the right shows the number and type of businesses assisted (FIG.16).

In 2013, the SBA worked with the dry cleaning community and several divisions within the department to resolve a perchloroethylene treatment dispute. A revision to a general permit will provide a long term solution to this issue.

Ombudsman

The Ombudsman provides assistance to individuals and organizations who wish to appeal a notice of violation issued by the department. As the Ombudsman reports to the Director of the department he is empowered to work with department staff to resolve a concern. The Ombudsman acts as an impartial, unbiased party during disputes.

Note that although the Ombudsman can investigate a complaint and make a recommendation, he has no direct authority to make or reverse a decision. The Ombudsman provides an impartial review of the violation and can concur with the findings or recommend a change to the director.

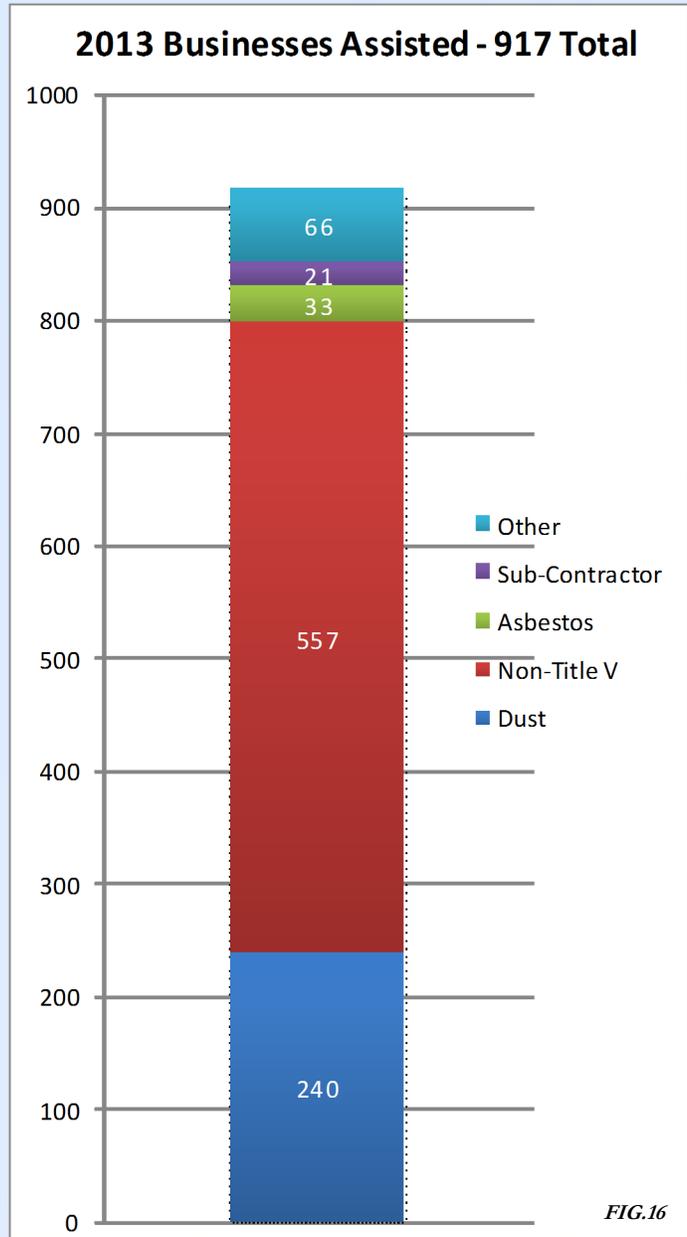
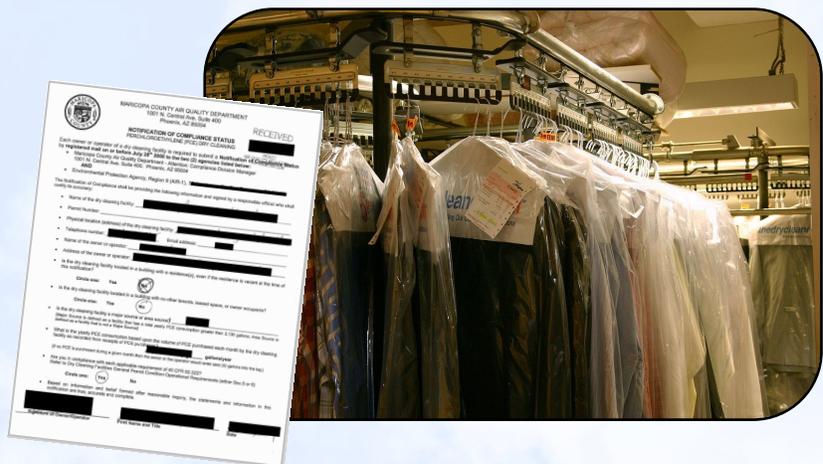


FIG.16



Government Liaison

In addition to working with citizens and businesses, the department also works with other governments. Figure 17 shows that just like businesses, governments have air quality issues. We worked with 68 agencies in 2013, including local and municipal governments, schools, county, state and federal agencies as well as local tribes.

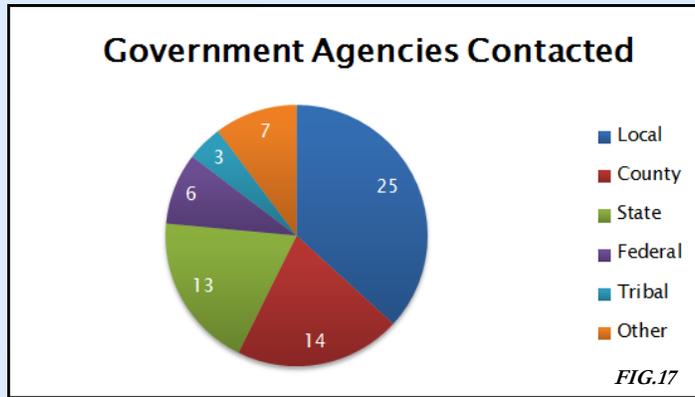
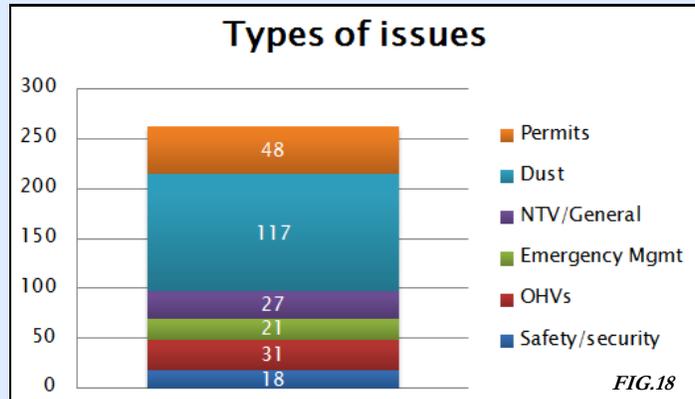


Figure 18 shows the types of issues addressed, most commonly: dust-related such as dust from roads, off-highway vehicles and generators. We also collaborate regularly with agricultural entities in responding to complaints as well as working with cities and towns on enforcement of air quality ordinances. Resolution of air quality issues often involves the coordination of multiple agencies.



2013 Air Quality Conference

Back by popular demand (after a several-year hiatus), the annual Maricopa County Air Quality Conference was held on November 6, 2013, at the Sheraton Phoenix Airport Hotel.



The Air Quality Conference was co-hosted by Maricopa County Air Quality Department (MCAQD) and the Arizona Manufacturers Council. More than 175 people attended the event. The day was filled with cutting edge information, lively discussions, and networking with colleagues and regulators from around the state.

Attendees learned about Exceptional Events, start-up and shutdown rules, and air quality attainment status of Maricopa County. They received a peak at future air quality regulations from EPA and a report from our department. The conference closed with a spirited panel discussion featuring representatives from businesses, industry associations, health & wellness community, and other governments.





Service Counter Opening

The Maricopa County Air Quality Department opened a new customer service window, at the department's main office, located at 1001 N. Central Ave. in Phoenix, AZ, 85004 on April 3, 2013.

The customer service window, which is open Monday through Friday from 8am to 5pm, processes all air quality transactions including permit applications and permit modifications.

In 2013, MCAQD processed 3,504 permits. Since the opening of the customer service window and with the streamlining of our permitting process, timeframes to issue permits decreased nearly 40 percent on average. The two permit categories that saw the biggest improvement were general permits with a 86 percent reduction in processing time (*FIG.19*), and dust permits with a decrease of 64.5 percent in processing time (*FIG.20*).

Air Quality's original customer service location (County Planning & Development One Stop Shop) at 501 N. 44th. Street in Phoenix continues to be available to serve our customers.

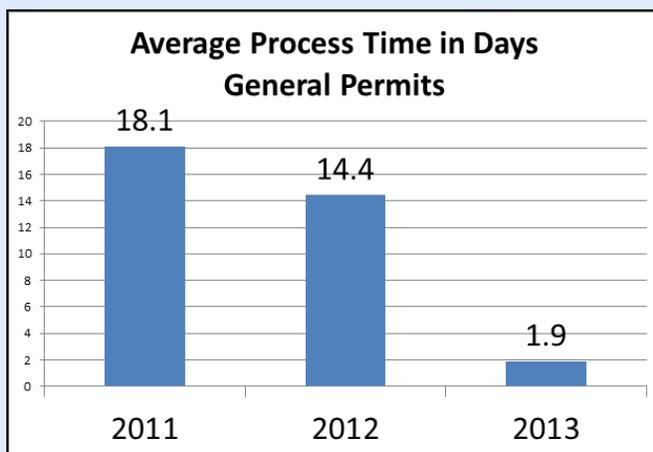


FIG.19

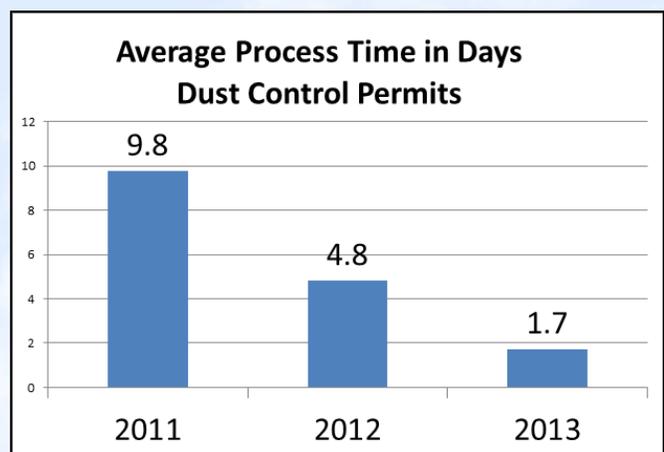
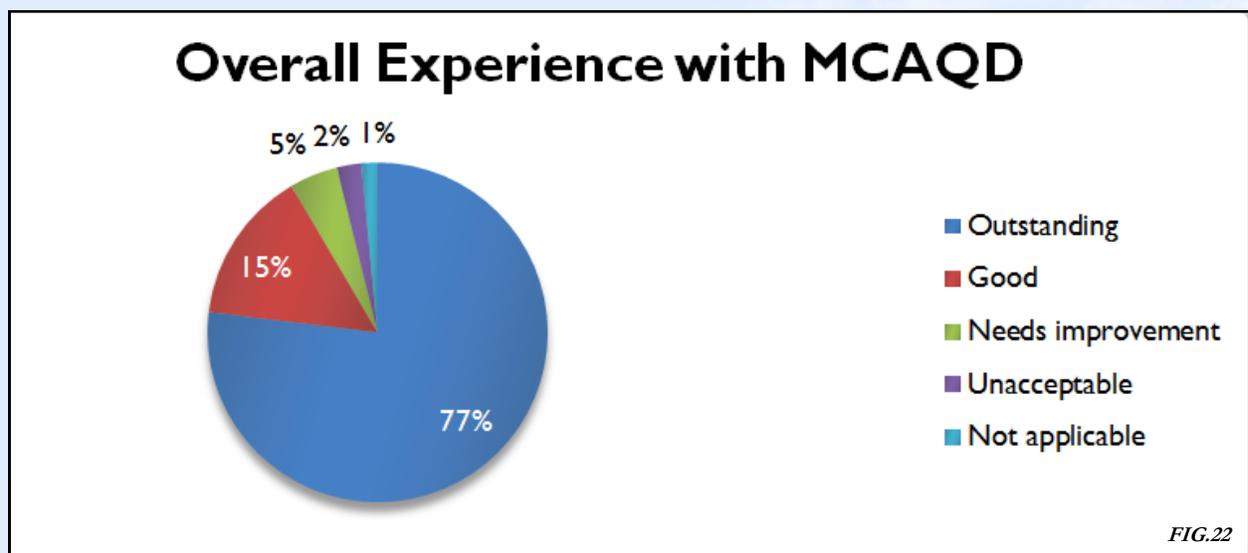
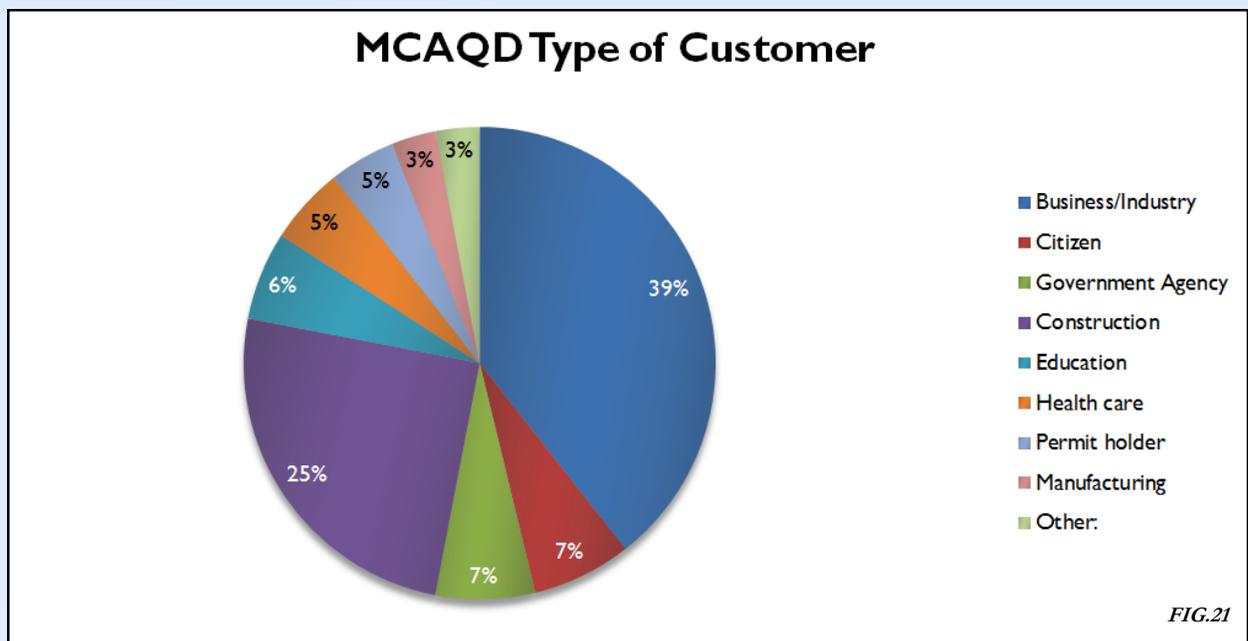


FIG.20

The Maricopa County Air Quality Department is committed to providing the highest quality services possible for our customers. To that end, the department has been fully engaged in implementing process improvements since 2011 to improve customer service, organizational effectiveness and streamline procedures. In July, 2012, the department instituted a customer feedback form and has actively solicited opinions from stakeholders regarding our services. MCAQD uses the responses to improve its services.

In calendar year 2013, the department received 130 total customer responses. The charts below illustrate the data including responses by customer type. The principal customer responses were from businesses (39 percent) and construction (25 percent), but we also received substantial input from healthcare, governments and citizens (FIG.21). Seventy-seven percent of respondents reported their contact with the department was “Outstanding” and 15 percent reported the contact was “Good” for an overall positive satisfaction rating of 92 percent (FIG.22). (Responses were submitted on paper, by email, fax, and electronically via our website.)



For Maricopa County Air Quality Department (MCAQD), 2013 was a busy year with numerous challenges, but it was a successful one. We had a nearly 50 percent fewer exceedances of the air quality health standards, met several critical milestones on our Five Percent Plan and had unprecedented success in our joint No Burn campaign. We appreciate all the help we received on our projects and programs.

Looking ahead:

- EPA will hopefully approve our Five Percent Plan this summer. That will trigger development of a maintenance plan and a redesignation request.
- We (MCAQD, MAG and ADEQ) will submit our 2008 marginal ozone plan to EPA, in July.
- EPA will propose a new ozone standard (NAAQS) by the end of 2014 or early 2015.
- Several key rulemakings will continue this year; New Source Review, Rule 316 and likely Rule 353.
- MCAQD will continue to improve our processes. Look for permit streamlining and new tools, online dust training and more electronic submittal opportunities.

As we move through 2014, Maricopa County Air Quality will continue to do all it can to enhance customer service and to keep our air clean and our residents healthy.

2013 Annual Report

Prepared by:

**Maricopa County Air Quality Department
1001 North Central Avenue, Suite 125
Phoenix, Arizona 85004**

Conveniently located off the Central Avenue and Roosevelt METRO Light Rail station.

(602) 506-6010 - Main line (8am-5pm weekdays)

(602) 372-2703 - Report an air quality problem

www.maricopa.gov/airquality

www.CleanAirMakeMore.com



Maricopa County
Air Quality Department