

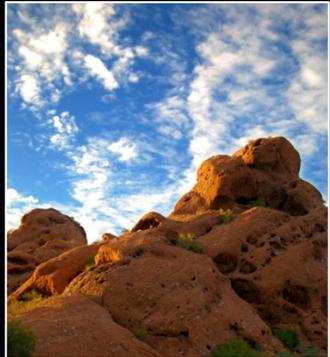
New Strengthened 2015 Ozone Standard



MAG Management Committee
October 14, 2015

Overview

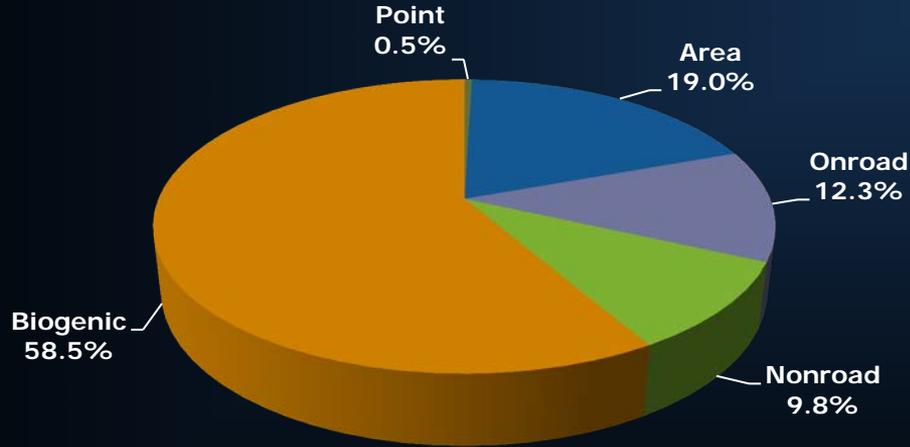
ENVIRONMENTAL PROGRAMS



- **Sources of Emissions that Contribute to Ozone Formation.**
- **New 2015 Ozone Standard and Nonattainment Designations.**
- **Ozone Monitoring Data.**
- **Existing and Proposed Federal Control Measures.**
- **Major Issues.**

Draft 2011 Ozone Season-Day VOC Emissions in the Maricopa Nonattainment Area

Volatile Organic Compounds (VOC) Emissions = 599.87 tons/day



Sources

Point: Industrial, manufacturing and electrical power generating facilities

Area: Solvents and coatings use, fuel storage and transport, waste treatment and disposal, industrial/chemical processes, residential/industrial fuel combustion, open burning and wildfires

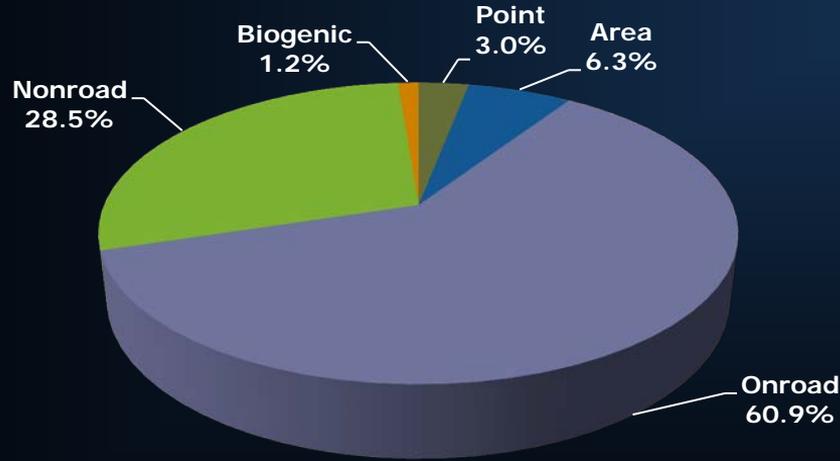
Onroad: Cars and trucks

Nonroad: Commercial, industrial, construction, mining, lawn and garden, farm and recreational equipment, aircraft and locomotives

Biogenic: Natural vegetation

Draft 2011 Ozone Season-Day NO_x Emissions in the Maricopa Nonattainment Area

Nitrogen Oxides (NO_x) Emissions = 253.86 tons/day



Sources

Point: Industrial, manufacturing and electrical power generating facilities

Area: Waste treatment and disposal, industrial/chemical processes, residential/industrial fuel combustion, open burning and wildfires

Onroad: Cars and trucks

Nonroad: Commercial, industrial, construction, mining, lawn and garden, farm and recreational equipment, aircraft and locomotives

Biogenic: Natural vegetation

New Strengthened Ozone Standard

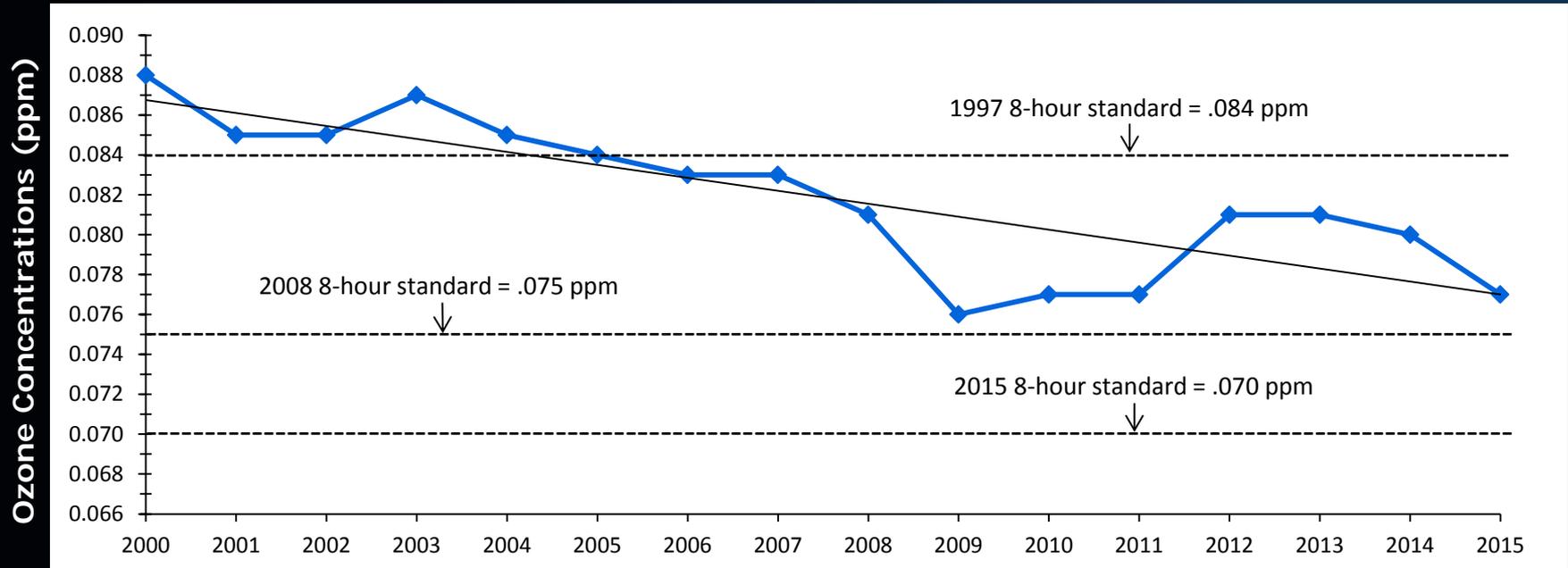
ENVIRONMENTAL
PROGRAMS



- **October 1, 2015-EPA signed a final notice to strengthen the eight-hour ozone standard from 0.075 to 0.070 parts per million.**
- **October 1, 2016-states submit designation recommendations for attainment/nonattainment to EPA.**
- **October 1, 2017-EPA finalizes the designations, classifications, and attainment dates based upon 2014-2016 ozone monitoring data.**
- **Attainment dates-2020 to late 2037 based upon ozone levels in the area (Marginal-Extreme).**

Eight-Hour Ozone Monitoring Data

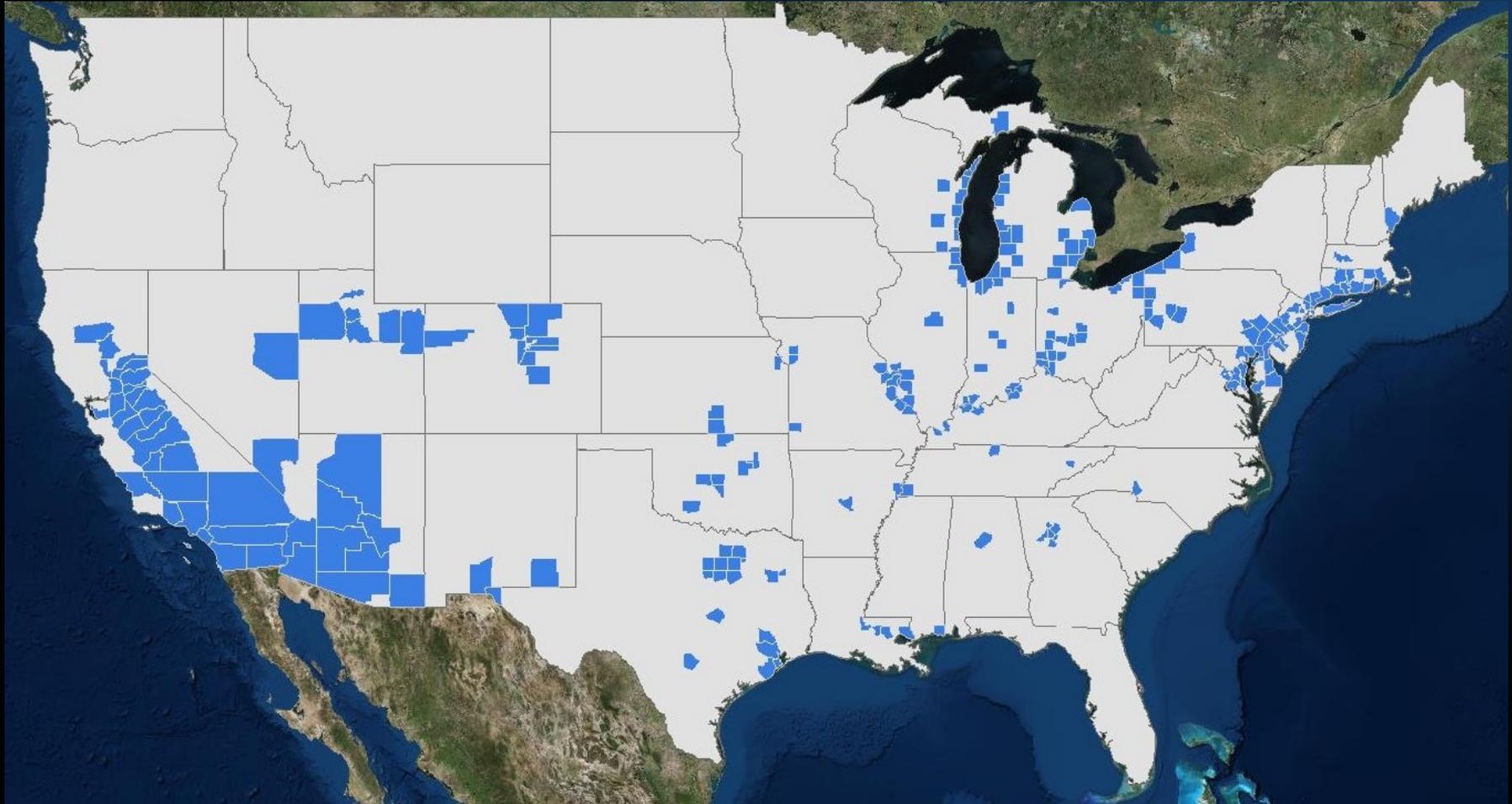
Highest 3-Year Average of the 4th Highest 8-Hour Ozone Concentration in the Maricopa Nonattainment Area



Notes:

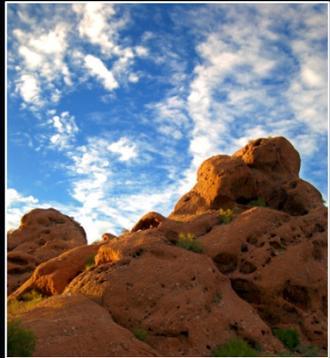
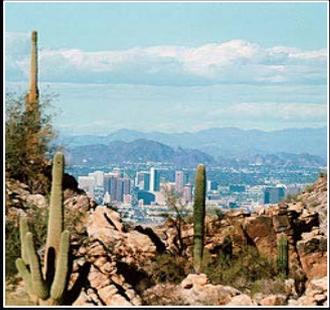
- Data for 2015 is preliminary and excludes values from a potential exceptional event that occurred on June 20, 2015.
- To attain the eight-hour ozone standard, the 3 year average of the 4th highest daily maximum 8-hour concentration at each monitor per year must not exceed the standard.
- Due to mathematical rounding, values greater than or equal to .085 ppm are necessary to exceed the .08 ppm eight-hour ozone standard.
- Sources: 2000-2008: MAG Eight-Hour Ozone Redesignation Request and Maintenance Plan for the Maricopa Nonattainment Area, February 2009; 2009-2014: EPA Air Quality System; 2015: Maricopa County, Pinal County, Arizona Department of Environmental Quality.

Counties Measuring Ozone Above the New Ozone Standard in 2015



Existing and Proposed Federal Rules That Will Assist in Attaining the Ozone Standard

ENVIRONMENTAL PROGRAMS



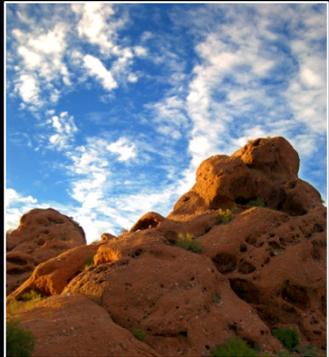
- **Requirements to Reduce Interstate Transport of Air Pollution.**
- **Regional Haze Regulations.**
- **Mercury and Air Toxics Standards.**
- **Clean Power Plan.**
- **Tier 3 Vehicle Emissions and Fuel Standards.**
- **Light-Duty Vehicle Tier 2 Rule.**
- **Mobile Source Air Toxics Rule.**
- **Light-Duty Greenhouse Gas/Corporate Average Fuel Efficiency Standards.**

Existing and Proposed Federal Rules That Will Assist in Attaining the Ozone Standard (continued)

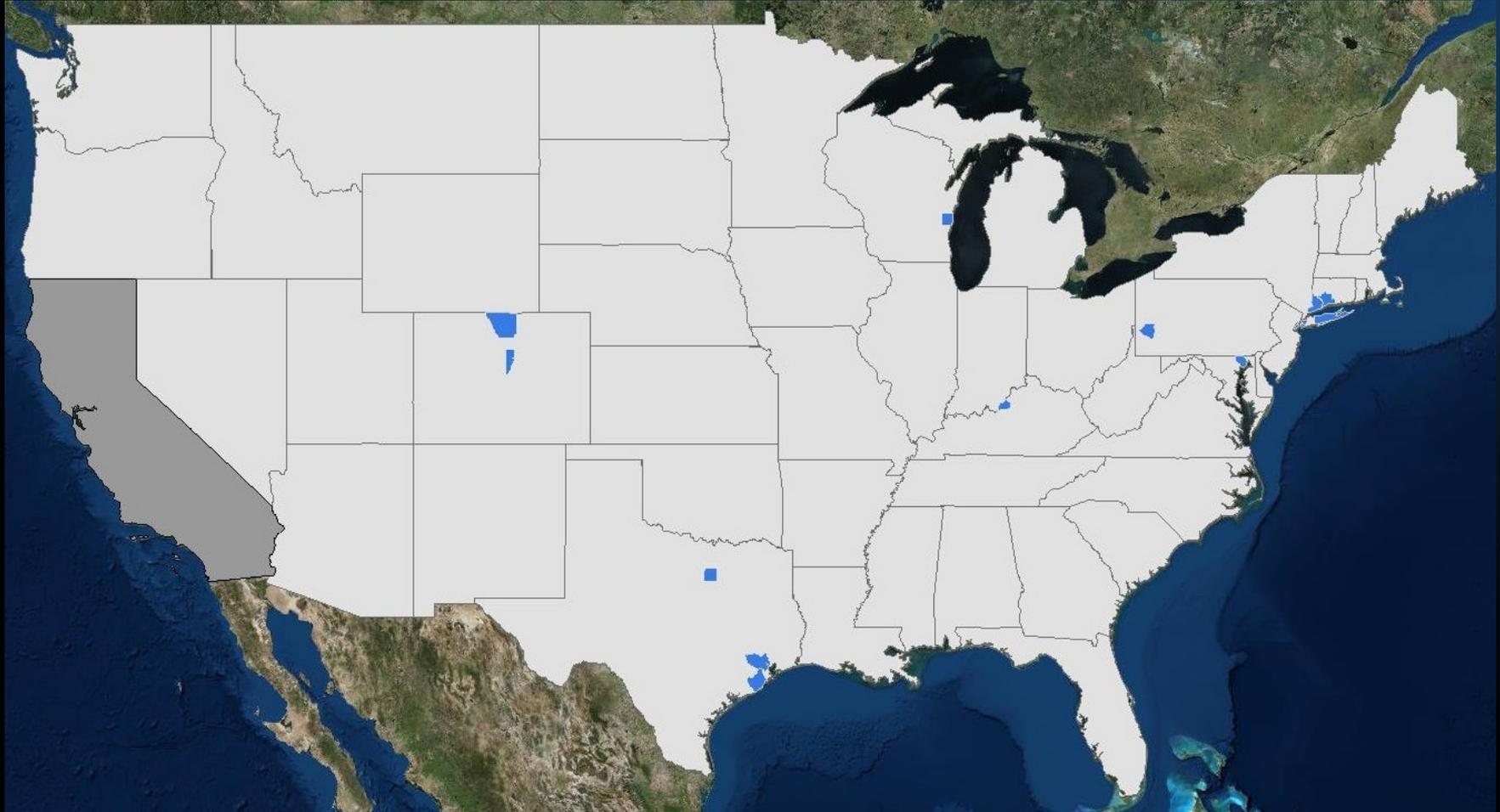
ENVIRONMENTAL PROGRAMS

- Heavy-Duty /Vehicle Greenhouse Gas Rule.
- Reciprocating Internal Combustion Engines NESHAP.
- Industrial/Commercial/Institutional Boilers and Process Heaters MACT and amendments.

EPA analysis indicates that these rules will help the vast majority of the counties in the U.S. to meet the standard by 2025 without additional actions.

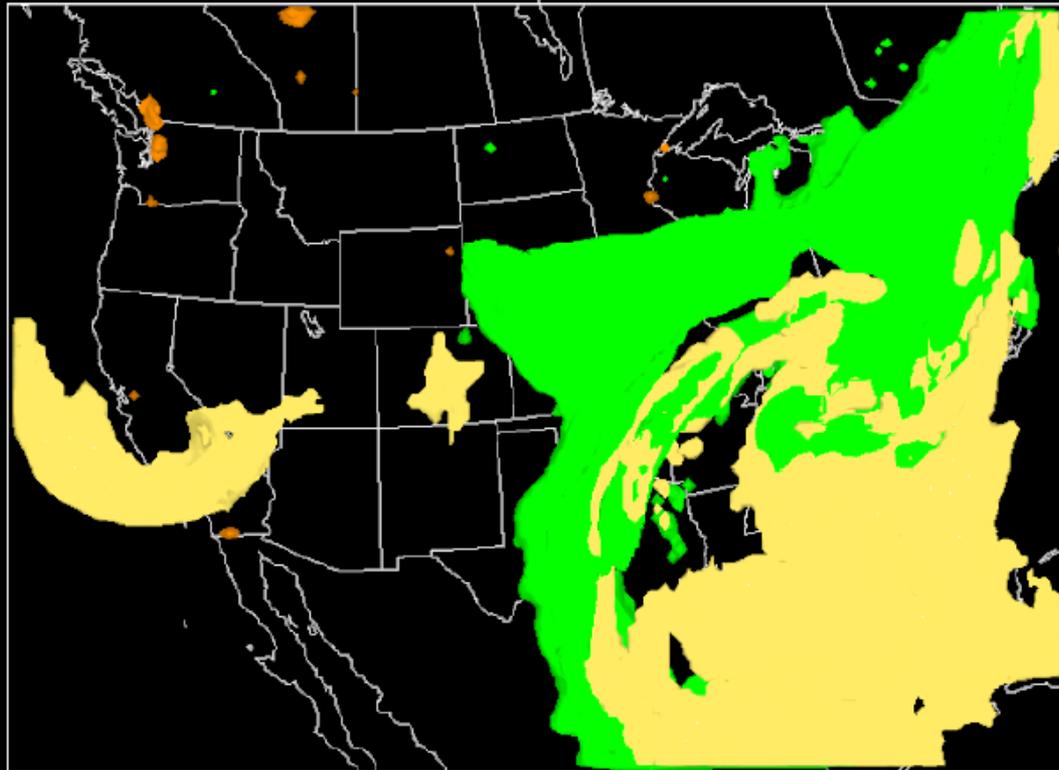
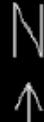


Counties Projected to Measure Ozone Above the New Ozone Standard in 2025 (Outside of California)



Transport Issues

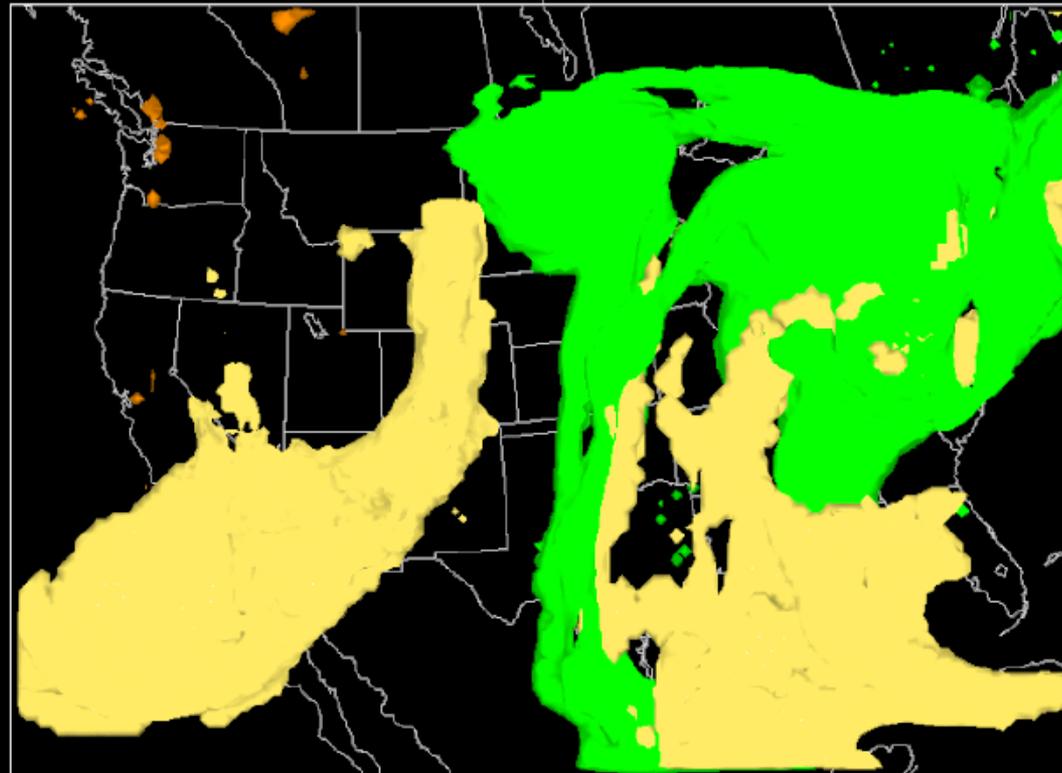
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29 May 11
178 of 336
Sunday



Ozone
VOC
NOx

Transport Issues

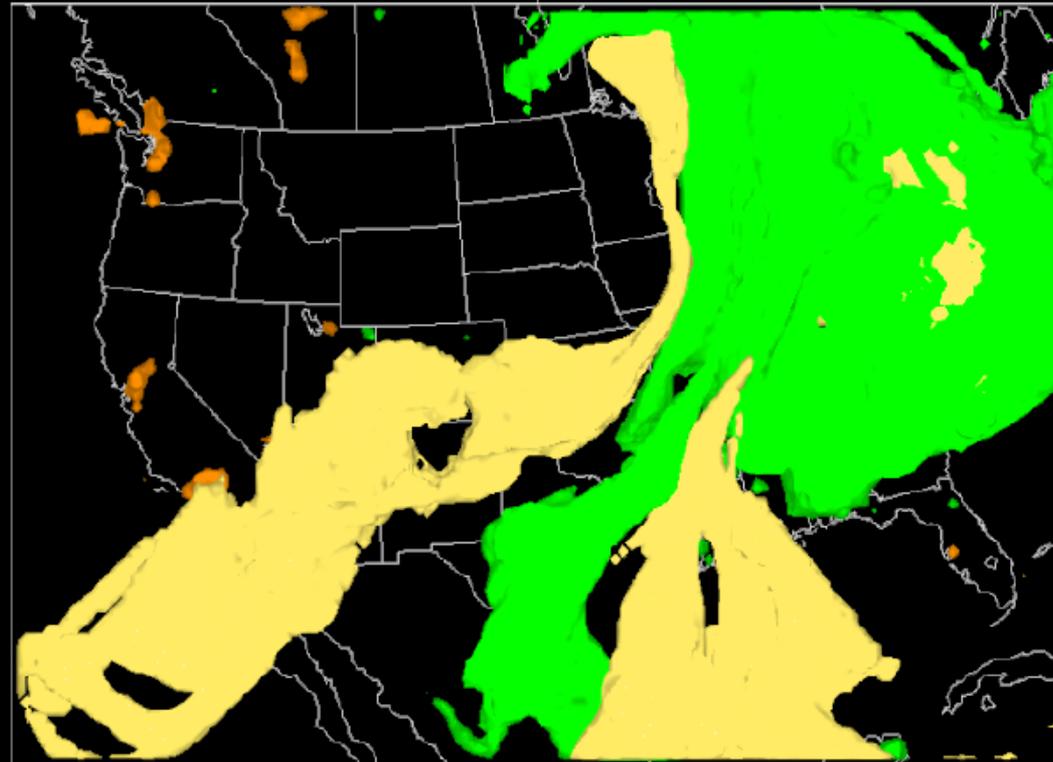
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30 May 11
202 of 336
Monday



Ozone
VOC
NOx

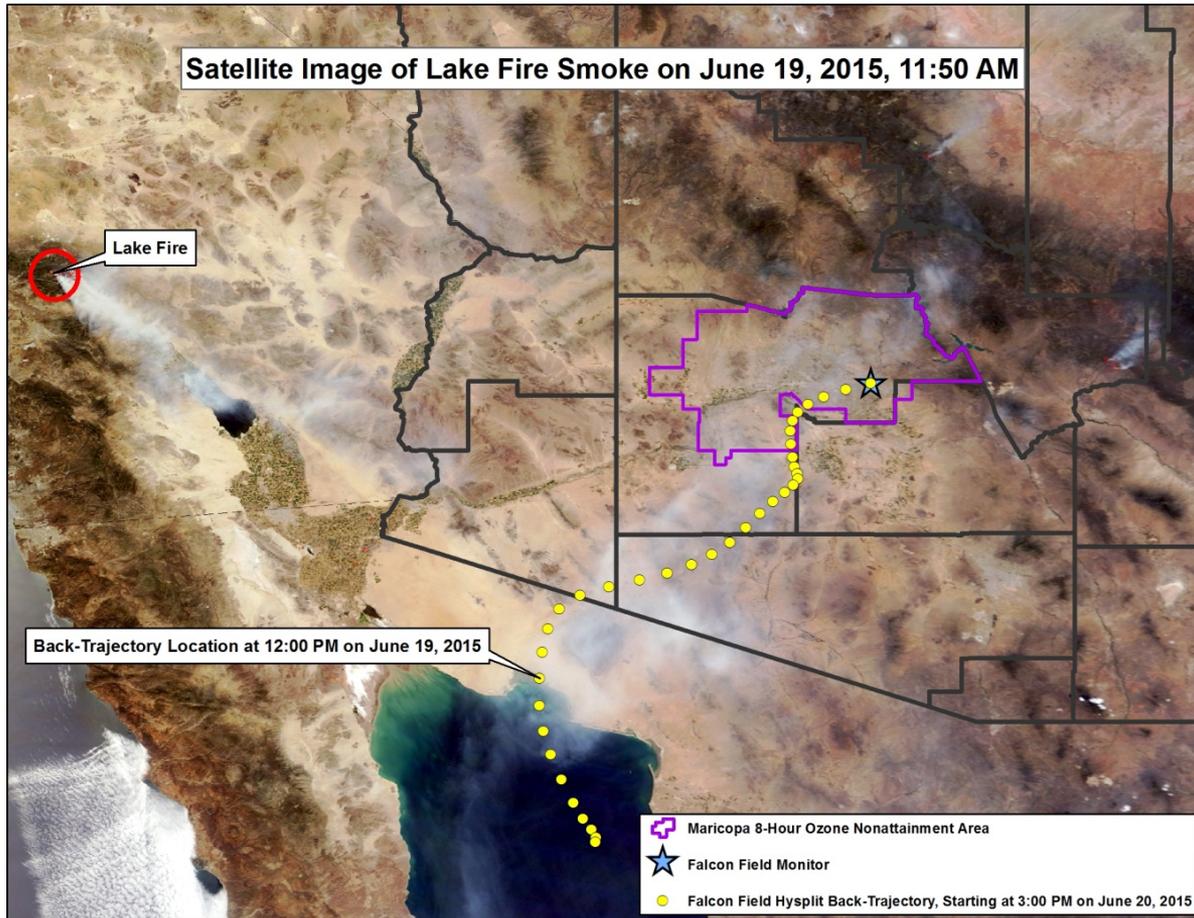
Transport Issues

09:00:00
31 May 11
226 of 336
Tuesday



Ozone
VOC
NOx

Exceptional Event Issues



ENVIRONMENTAL PROGRAMS

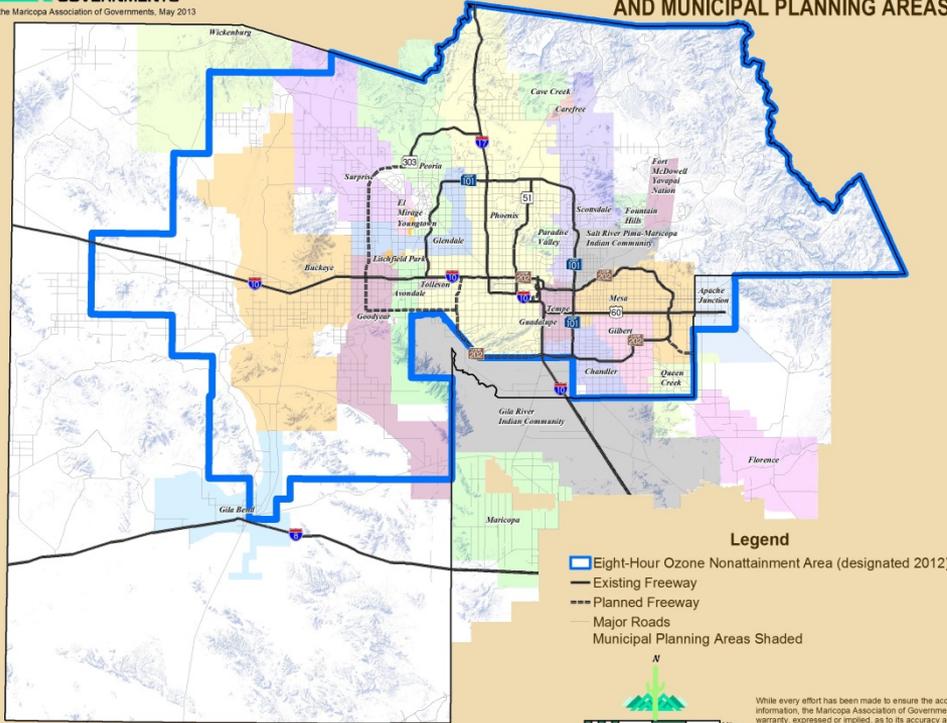
Maricopa Eight-Hour Ozone Nonattainment Area Boundary Issues



MARICOPA ASSOCIATION of GOVERNMENTS
Prepared by the Maricopa Association of Governments, May 2013

Figure 1

EIGHT-HOUR OZONE NONATTAINMENT AREA AND MUNICIPAL PLANNING AREAS



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.

ENVIRONMENTAL PROGRAMS

Clean Air Act Ozone Nonattainment Area Requirements by Classification



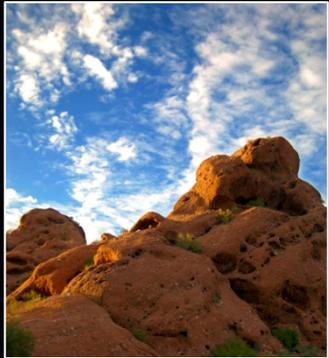
| | | NSR offset ratio | Major source threshold | |
|--|---|----------------------|------------------------|---|
| EXTREME (20 years to attain) | TRAFFIC CONGESTION CONTROLS (if appropriate) | 1.5 : 1 Extreme | 10 | |
| | CLEAN FUELS REQUIREMENT FOR BOILERS | | | |
| SEVERE (15/17 years to attain) | PENALTY FEE PROGRAM FOR MAJOR SOURCES | 1.3 : 1 Severe | 25 | |
| | LOW VOC REFORMULATED GAS (as appropriate) | | | |
| | VMT GROWTH DEMONSTRATION (& TCMs if needed) | | | |
| SERIOUS (9 years to attain) | VMT DEMONSTRATION (& TCMs if needed) | 1.2 : 1 Serious | 50 | |
| | NSR REQUIREMENTS FOR EXISTING SOURCE MODS | | | |
| | ENHANCED MONITORING PLAN | | | CLEAN FUELS PROGRAM (if applicable) |
| | MODELED DEMO OF ATTAINMENT | | | MILESTONE DEMONSTRATIONS and CONTINGENCY MEASURES FOR RFP |
| | 3% ANNUAL RFP UNTIL ATTAINMENT | | | ENHANCED I/M for larger population areas |
| | CONTINGENCY MEASURES FOR FAILURE TO ATTAIN | | | |
| | Stage II Gasoline Vapor Recovery | | | BASIC VEHICLE I/M for larger population areas |
| MODERATE (6 years to attain) | 15% VOC ROP or 15% VOC/NOx RFP (OVER 6 YEARS) | 1.15 : 1 Moderate | 100 | |
| | VOC/NOx RACT for MAJOR/CTG SOURCES | | | ATTAINMENT DEMONSTRATION |
| | TRANSPORTATION CONFORMITY DEMONSTRATION (MVEBs) | | | |
| MARGINAL (3 years to attain) | NONATTAINMENT NEW SOURCE REVIEW PROGRAM | 1.1 : 1 Marginal | 100 | |
| | MAJOR SOURCE EMISSION STATEMENTS | | | |
| | BASELINE EMISSION INVENTORY (EI) | | | PERIODIC EMISSION INVENTORY UPDATES |



ENVIRONMENTAL PROGRAMS

Issues to Address

- **Transport-impacts background concentration in the region and difficult to control.**
- **Exceptional events-wildfires and stratospheric ozone intrusion.**
- **State recommendations for nonattainment area boundaries.**
- **EPA final designations, classifications, and attainment dates based upon 2014-2016 ozone monitor data.**
 - **Off-set requirements for major industrial sources.**
 - **Transportation conformity.**
- **Obtain three years of clean data at the air quality monitors.**

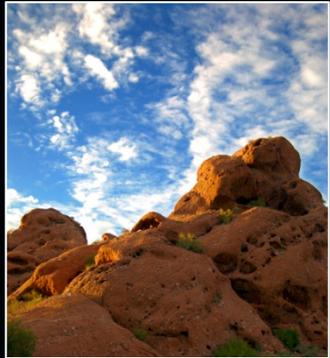


Possible Action

ENVIRONMENTAL PROGRAMS



Recommend that MAG work cooperatively with the Western Regional Alliance to lessen the impact of the new 2015 ozone standard.





**For more information
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