

New 2015 Ozone Standard Issues

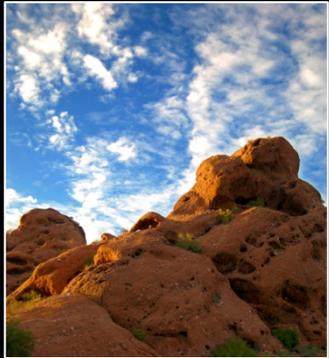


Intermountain West Annual Meeting
April 26, 2016



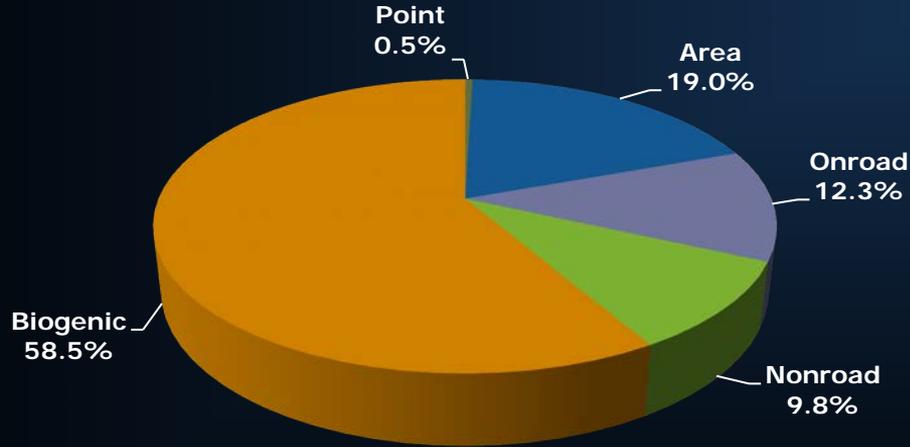
New Strengthened Ozone Standard

- **October 26, 2015-EPA published 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 based upon 2013-2015 ozone monitoring data.**
- **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).**



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

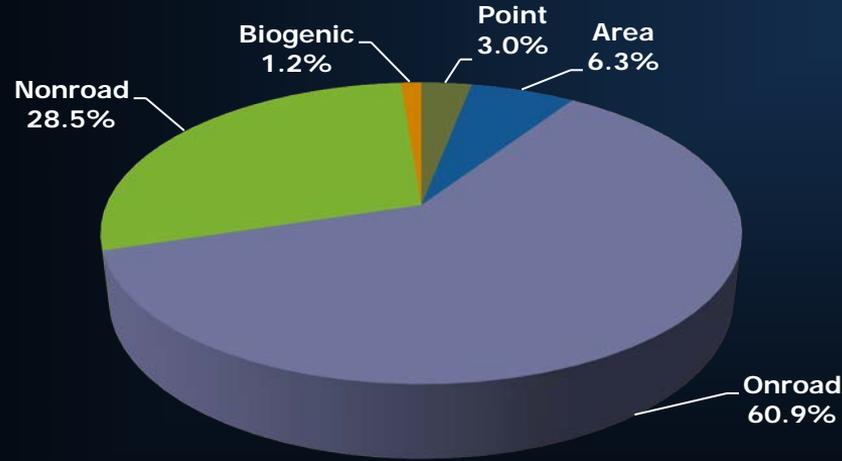
Onroad: Cars and trucks

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

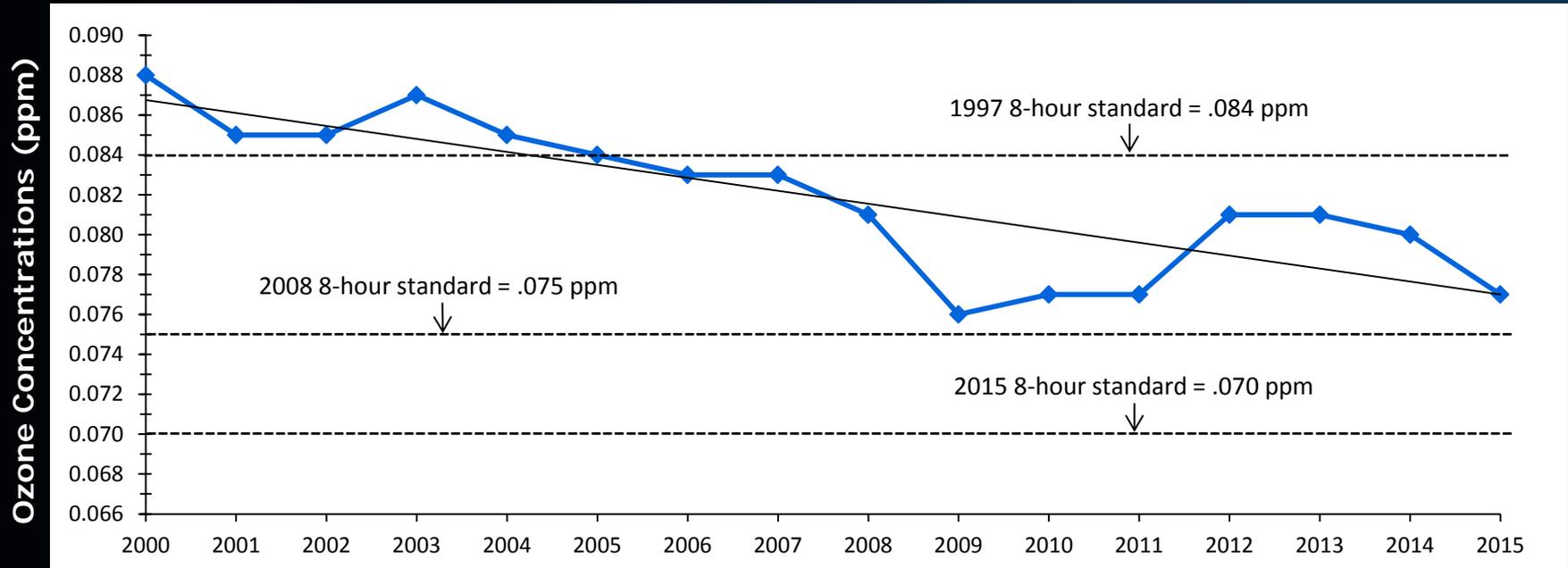
Onroad: Cars and trucks

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

Biogenic: Natural vegetation

Eight-Hour Ozone Monitoring Data

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

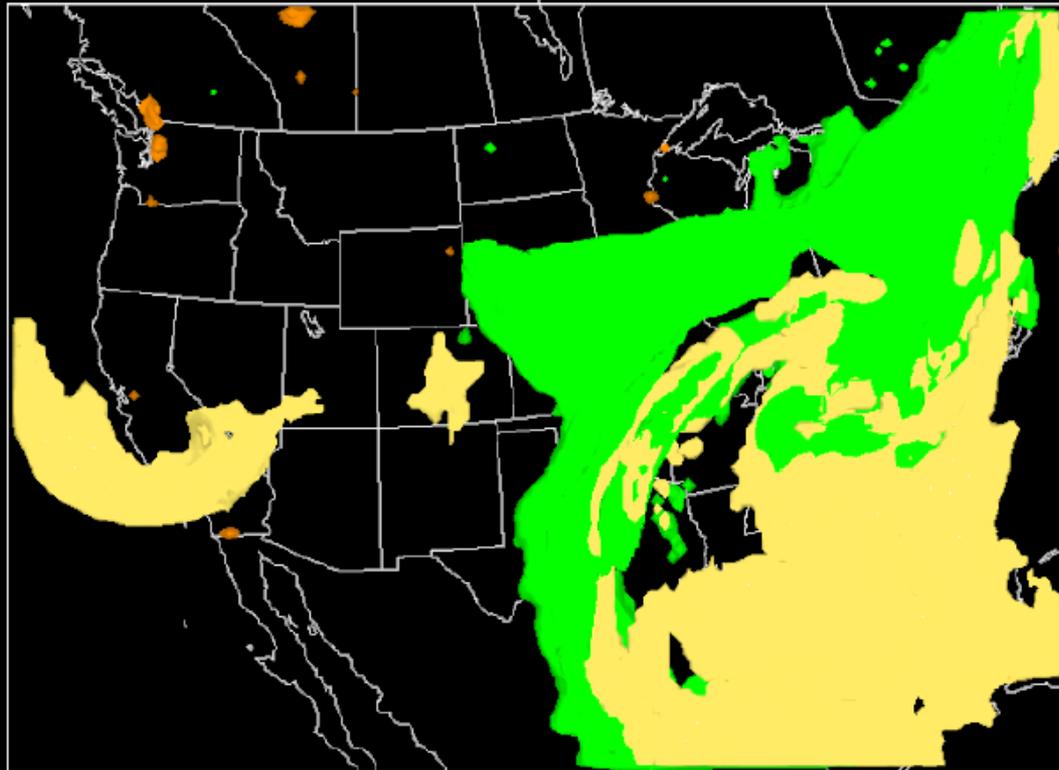


Notes:

- 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.

Transport Issues

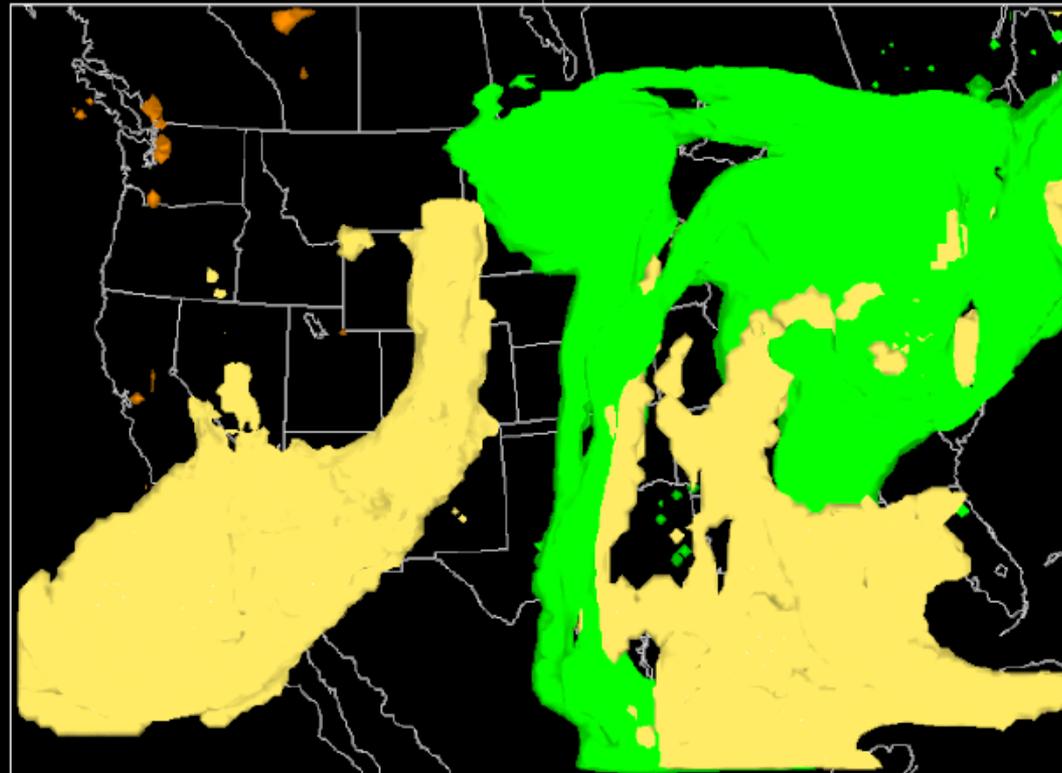
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29 May 11
178 of 336
Sunday



Ozone
VOC
NOx

Transport Issues

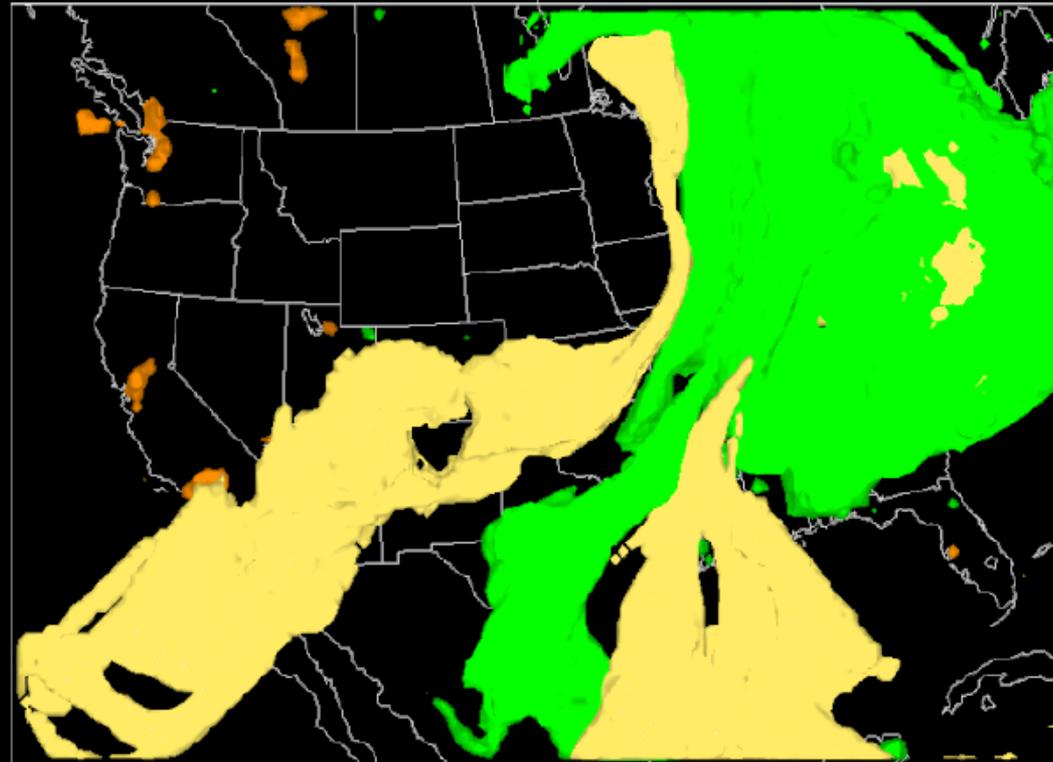
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Monday



Ozone
VOC
NOx

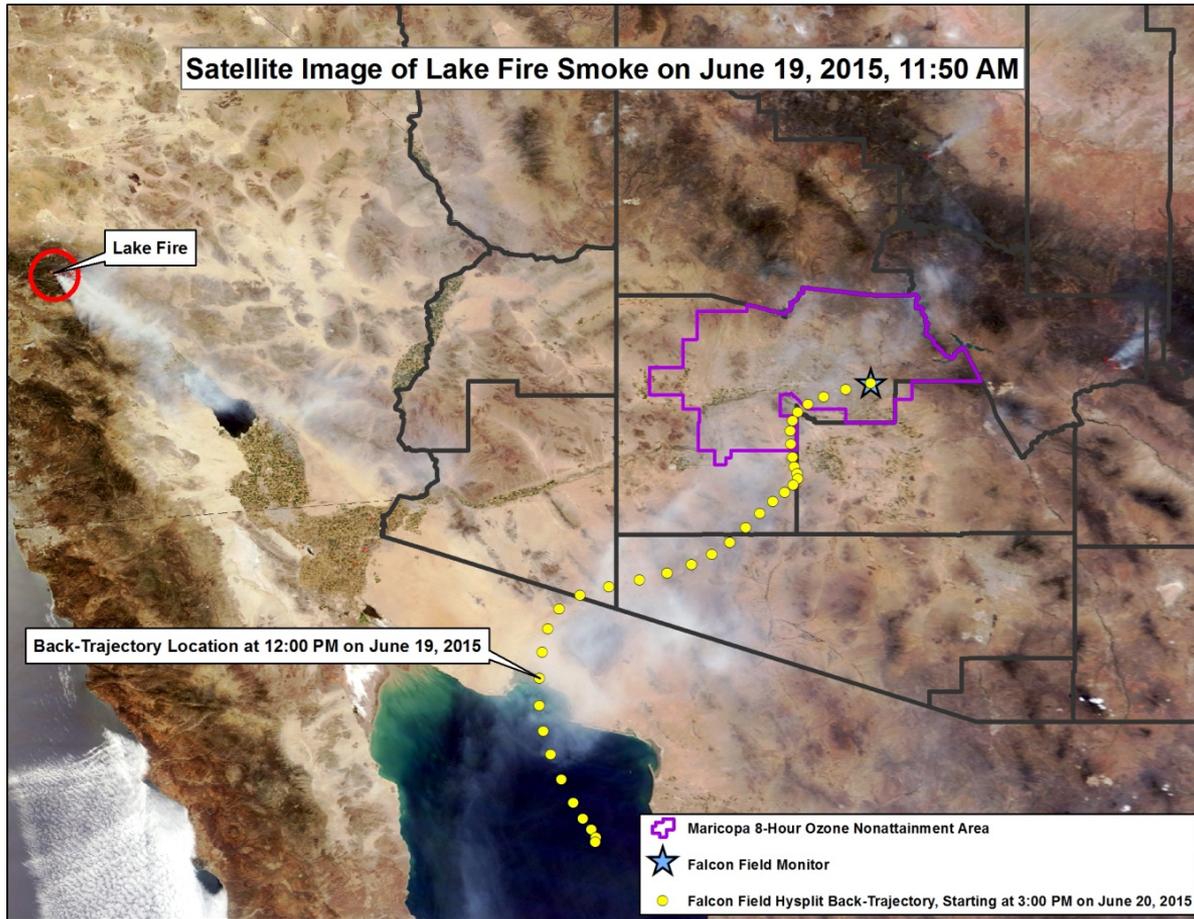
Transport Issues

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31 May 11
226 of 336
Tuesday



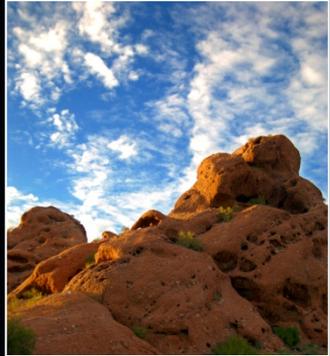
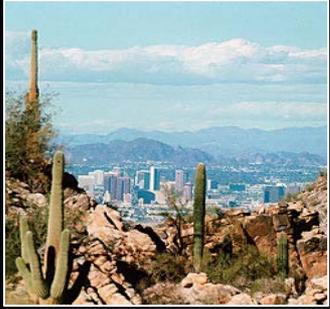
Ozone
VOC
NOx

Exceptional Event Issues



Nonattainment Area Analyses and Boundary Designation

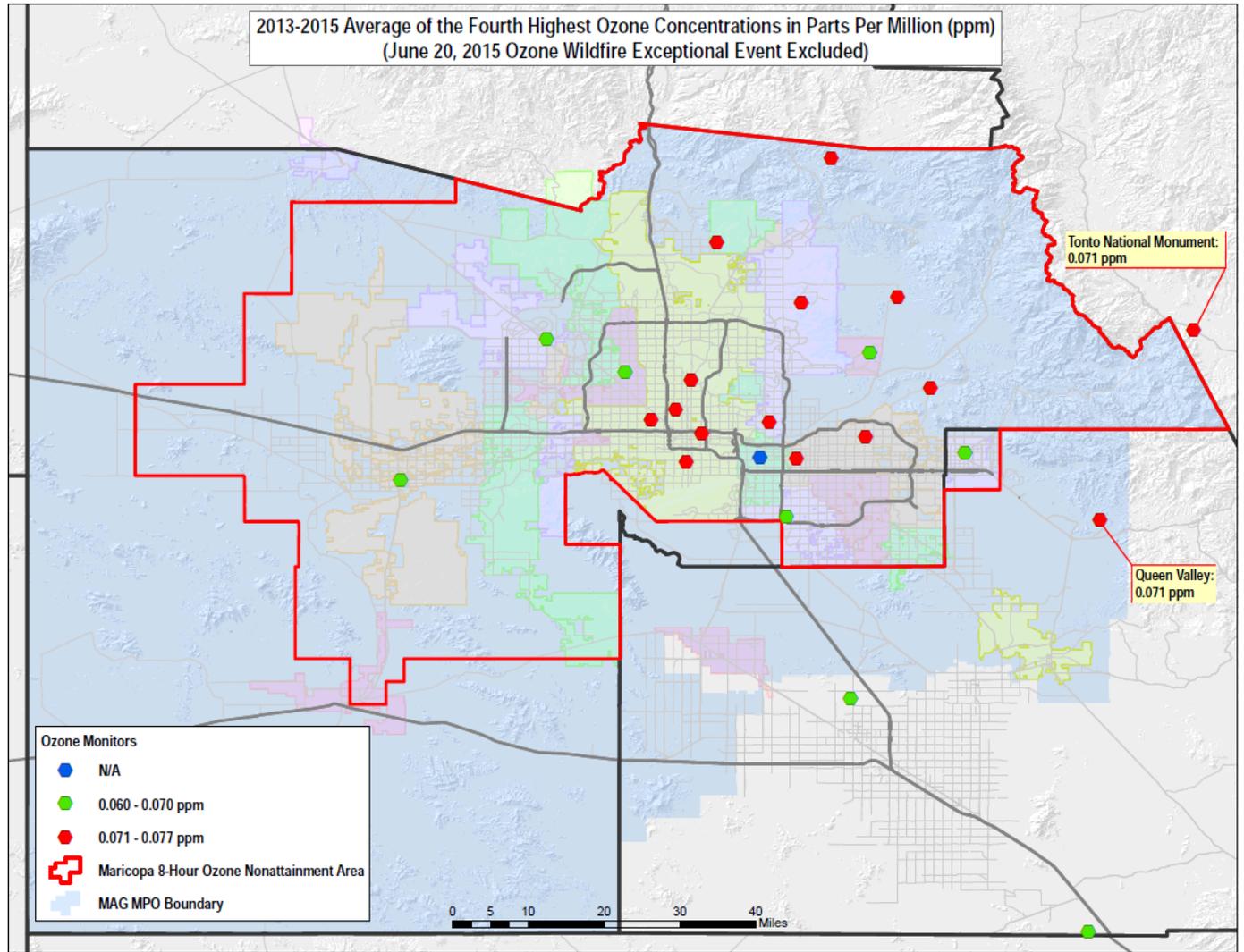
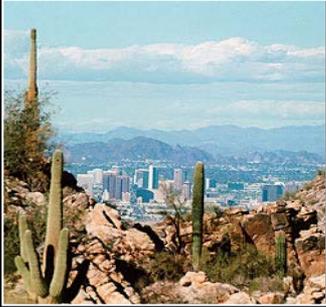
ENVIRONMENTAL PROGRAMS



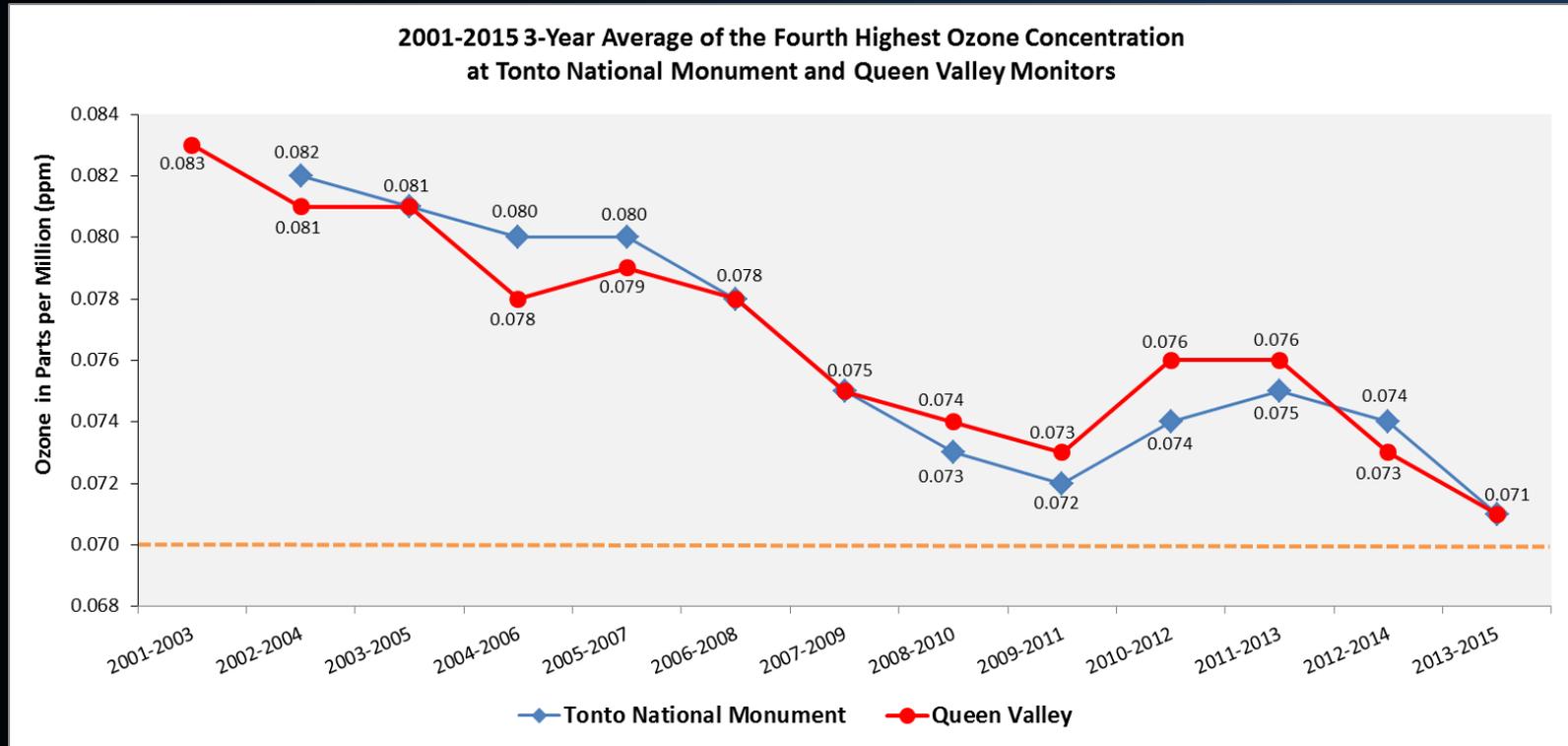
- **Nonattainment areas include areas that are violating the standard or are contributing to the nonattainment of other nearby areas-Clean Air Act Section 107(d).**

- **Evaluation of five factors:**
 - **Air Quality Data.**
 - **Emissions and Emissions Related Data.**
 - **Meteorology.**
 - **Geography/Topography.**
 - **Jurisdictional Boundaries.**

ENVIRONMENTAL PROGRAMS



Ozone Monitoring Trend Data at Queen Valley and Tonto National Monument



Notes:

- Data Source: U.S. EPA Air Data (<http://www3.epa.gov/airdata>) accessed on February 19, 2016.
- The June 20, 2015 exceedance of 0.079 ppm at the Tonto monitor is excluded from the data as an exceptional event caused by the Lake Fire in San Bernardino County, California.

Background Ozone

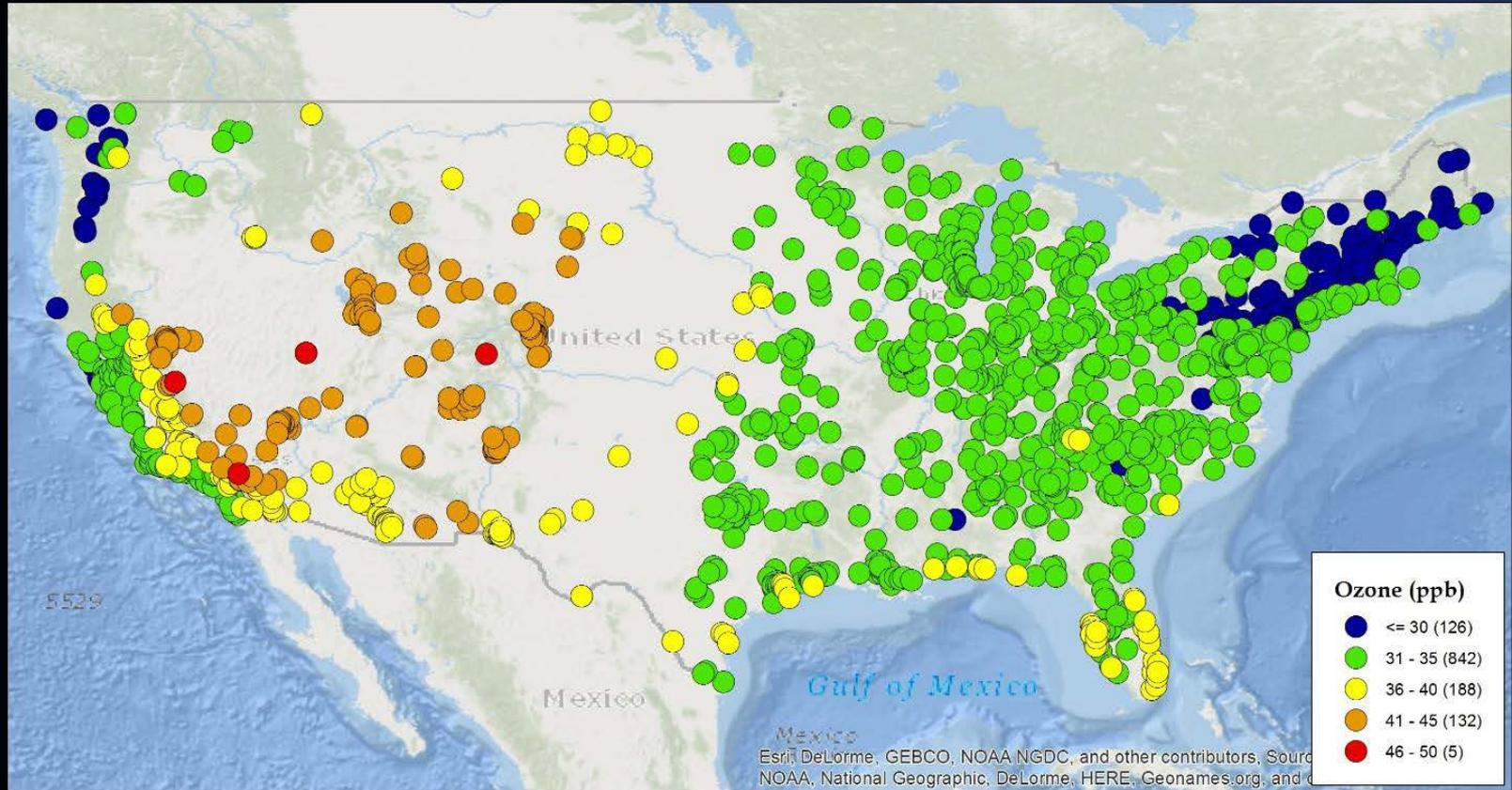


ENVIRONMENTAL
PROGRAMS



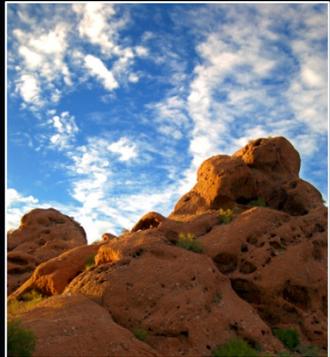
- **Natural sources.**
 - Plants, vegetation, trees, wildfires, stratospheric ozone intrusion.
- **Transport from other states.**
- **International transport.**
- **EPA estimates that in 2017, background ozone will be:**
 - 52% of the concentration in the Maricopa nonattainment area.
 - 67% of the concentration at the Queen Valley Monitor and 64% at the Tonto Monitor.

EPA Estimate of Background Ozone Concentrations



Ozone Boundary Issues

ENVIRONMENTAL PROGRAMS



- **Background ozone – a bigger percentage of an area's ozone concentration with the lower 2015 ozone standard.**
- **Tighter controls on business and industry inside the nonattainment area.**
- **Transportation conformity requirements.**
- **Regional Planning Agency authority to develop air quality plans tied to Metropolitan Planning Organization Boundary (A.R.S. 49-406A.)**
 - **Plan determines the Motor Vehicle Emissions Budget for transportation conformity.**

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



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Potential Relief

- Lawsuit filed to challenge the 2015 ozone standard by AZ, AR, NM, ND, and OK.
- Clean Air Act Section 179B. International Border Areas.
- Congressional Relief-H. R. 4775 Ozone Standards Implementation Act of 2016.
 - Postpones nonattainment designations by EPA until October 25, 2025.
 - 10-year cycle for review of National Ambient Air Quality Standards.
 - Consideration of technological feasibility in setting air quality standards.





**For more information
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