

Sustainability Commission

March 18, 2019

January 14, 2019
Meeting Follow-up



Tempe
Making waves in the desert

Responses to Questions



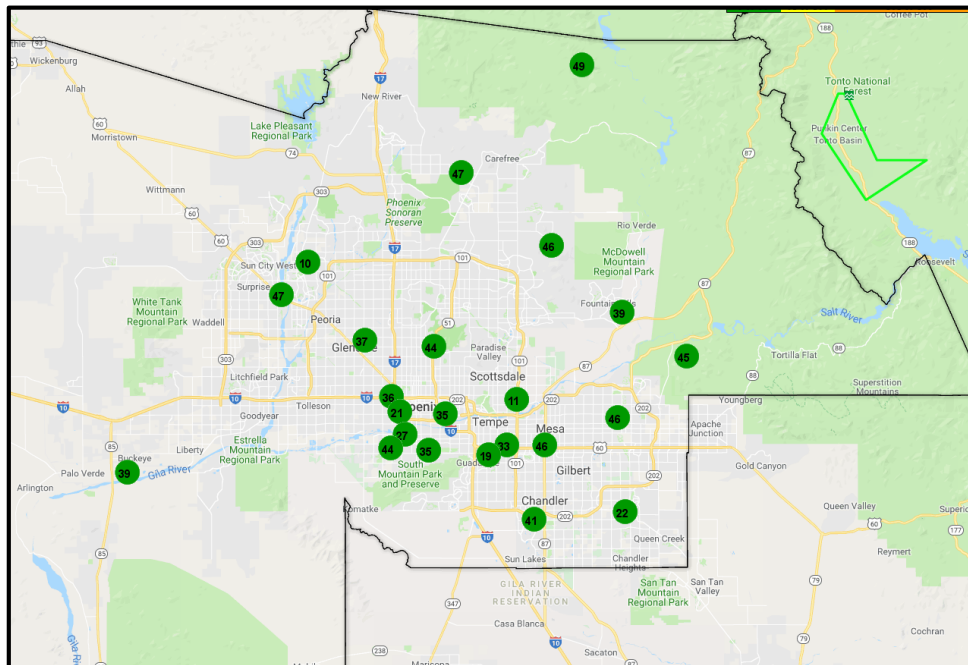
- Air Quality Monitoring and Criteria for where monitoring stations are located.
- Particulate Matter Monitoring, why PM-10 v. PM 2.5?
- Regional Goals
- City Air Quality Goals
- Air Quality links on the City Web

Air Quality Monitoring and Criteria



Monitors	
Type	Amount
Ozone O ₃	17
Particulate Matter PM-10 & PM-2.5	15+8 (23)
Carbon Monoxide CO	7
Nitrogen Dioxide NO ₂	5
Sulfur Dioxide SO ₂	2
Lead (Airborne) Pb	1
1 lead monitor and 1 PM-2.5 control monitor not listed	

24 stations and a total of 57 monitors includes 189 active instruments



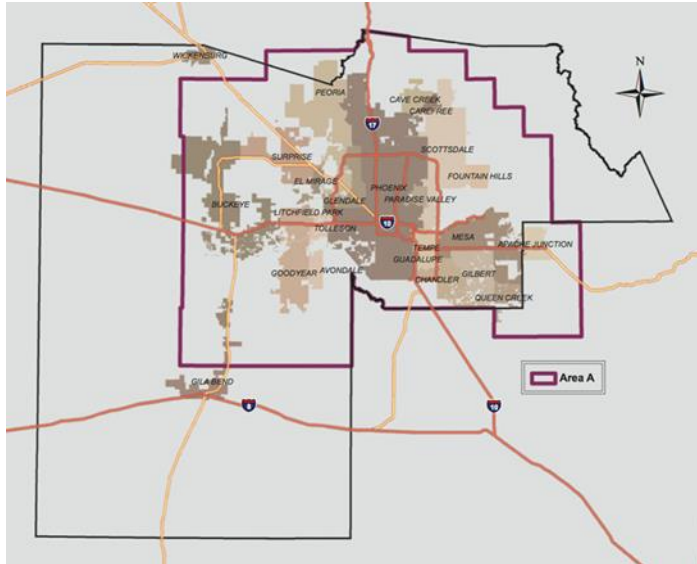
Air Quality Monitoring and Criteria



Monitoring objectives:

- Provide the public with timely air quality data
- Determine compliance with National Ambient Air Quality Standards (NAAQS)
- Support air pollution research.

Particulate Matter Monitoring



- PM-10 is the major problem pollutant in Maricopa County and Area A
- Maricopa County is in attainment with the standard for PM 2.5
- Exceedances during the wild fire season = Labor intensive, challenges to document exceptional events.

Particulate Matter Monitoring



PM-10

- No more than one exceedance of concentrations of 150 $\mu\text{g}/\text{m}^3$ per year on average over three years.

PM-2.5

- The three-year average of its annual average PM_{2.5} concentration (at each monitoring site in the area) is less than or equal to 12 $\mu\text{g}/\text{m}^3$

Regional Goals



PM-10: Reach attainment and subsequent reclassification of Area A from Serious Non-Attainment to Attainment by:

Implementation of measures the 5% annual reduction plan

- MCAQD rule and ordinance enforcement
- Maricopa cities & towns to contribute by paving or stabilizing roadways, adding or replacing PM-10 efficient street sweepers and enforce leaf blower debris and track-out not to be deposited on public roads

Regional Goals



PM-2.5: Stay in attainment by:

- No-burn campaigns by MCAQD during the winter holiday season
- MCAQD rule clarifications regarding open fires for food preparation, firefighter training activities.

City Controls

- Tracks Emission and implement controls for permitted point sources.
- MCAQD Rule 310 dust control for designated personnel and annual air quality training of employees under the MS4 program



Source Categories & Contributions incl. from City Operations						
NAAQS	Precursor	Point	Area	On-Road	Non-Road	Biogenic
Carbon Monoxide CO	CO for ground O ₃	City stationary diesel-powered emergency generators		Non-electric motor vehicles	Constr. equipment, South Pacific Railroad, aircraft	
Lead (Airborne) Pb					Smaller propeller aircraft	
	VOC for ground O ₃	City waste container painting, vehicle repair parts cleaning	Summer wildfires	Non-electric motor vehicles	Constr. equipment, South Pacific Railroad, aircraft	Natural emissions from vegetation
	Ammonia NH ₃ for NOx and PM	Livestock Production				
Nitrogen Dioxide NO ₂	NOx for O ₃ and PM	City stationary diesel-powered emergency generators		Non-electric motor vehicles	Constr. equipment, South Pacific Railroad, aircraft	
Particulate Matter PM ₁₀		Industrial sand and gravel pit operation sites, leaf blower use	City public works digging and hauling dirt and alley uncontained waste pick up	Re-entrained dust from vehicle travel over debris in city roadways		
Particulate Matter PM _{2.5}		City stationary diesel-powered emergency generators	Residential fireworks & wood burning, summer wildfires	Non-electric motor vehicles	Constr. equipment, South Pacific Railroad	
Sulfur Dioxide SO ₂	SOx for PM	City stationary diesel-powered emergency generators		Non-electric motor vehicles	Constr. equipment, South Pacific Railroad, aircraft	



City Goals

- Stay in compliance with air quality regulations
- Apply best management practices to control emissions from city operations

City Air Quality Links

City Web:

<https://www.tempe.gov/airquality>

Monitoring Stations:

<http://alert.fcd.maricopa.gov/alert/Google/v3/air.html>

Periodic Emission Inventories:

<https://www.maricopa.gov/2628/Emissions-Inventory>

AQ Contacts



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