



### AIR QUALITY FORECAST ISSUED Friday, December 30, 2016

This report is updated by 1:00 p.m. Sunday thru Friday and is valid for areas within and bordering Maricopa County in Arizona

FORECAST DATE	YESTERDAY <u>Thu, 12/29/2016</u>	TODAY <u>Fri, 12/30/2016</u>	TOMORROW <u>Sat, 12/31/2016</u>	EXTENDED <u>Sun, 1/1/2017</u>
NOTICES			PM-2.5 High Pollution Advisory 	PM-2.5 High Pollution Advisory 
AIR POLLUTANT	Highest AQI Reading/Site (*Preliminary data only*)			
O3	40 Humboldt Mountain	31 Good	28 Good	26 Good
CO	25 West Phoenix	11 Good	10 Good	7 Good
PM-10	44 Durango	39 Good	36 Good	37 Good
PM-2.5	69 West Phoenix	57 Moderate	102 Unhealthy for Sensitive Groups	112 Unhealthy for Sensitive Groups

O3 = Ozone CO = Carbon Monoxide PM-10 = Particles 10 microns & smaller PM-2.5 = Particles smaller than 2.5 microns  
 "High Pollution Advisory" (HPA) means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.  
 "Health Watch" (HW) means that the highest concentration of OZONE, PM-10 or PM-2.5 may approach the federal health standard.

Health Statements	
Friday, 12/30/2016	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
Saturday, 12/31/2016	Active children and adults and people with respiratory disease such as asthma should limit prolonged exertion outdoors.

## Synopsis and Discussion

**A PM-2.5 High Pollution Advisory is valid for Saturday, December 31, 2016.**

**A PM-2.5 High Pollution Advisory is valid for Sunday, January 1, 2017.**

The Southwest will have an active weather pattern this weekend. An enclosed upper-level low will move in from the south tomorrow, followed by another system on Sunday. Both of these systems are expected to be wet. Starting tonight, Phoenix will see light rain showers. Therefore, PM-2.5 should finish the day in the Low-Moderates.

Unfortunately, we've got a break in the weather pattern that will result in brief stagnation Saturday night before the second system crosses Arizona on Sunday morning. These hours of calm conditions on Saturday night and early Sunday morning can be enough to allow a large buildup of PM-2.5 and result in an exceedance. Therefore, a High Pollution Advisory is issued for Saturday and Sunday. Even though a PM-2.5 HPA is in place for Saturday and Sunday, air quality during the day for both days should be excellent due to the sporadic rain showers. It will be the evening hours leading into Saturday night and Sunday morning that will have high PM-2.5 levels in the Valley. Once the second system arrives Sunday morning, rain showers accompanying it should clear out the airshed and improve air quality.

Check back on Sunday for a look ahead at next week's weather and air quality. Until then, have a great weekend! –P.Patel

Check out our new reports on year-to-date observed air quality data for [ozone](#), [PM-10](#), and [PM-2.5](#). The permanent location of the links can be found below.



**BURN CLEANER**  
**BURN BETTER**

Check out the latest issue of:

**Cracking the AQ Code**

Start receiving your daily Air Quality Forecast email today!

**GovDelivery**

Get your Air Quality Forecast anywhere with Maricopa County's App!

**CLEAN AIR MAKE MORE**

**Current Air Quality  
Interactive Map**

**Current Web  
Camera Images**

Year-to-Date  
**OZONE**  
Report

Year-to-Date  
**PM<sub>10</sub>**  
Report

Year-to-Date  
**PM<sub>2.5</sub>**  
Report

**POLLUTION MONITOR READINGS FOR Thursday, December 29, 2016**

**O3 (OZONE)**

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake	27	25	
Apache Junction	35	32	
Blue Point	35	32	
Buckeye	23	21	
Casa Grande	24	22	
Cave Creek	36	33	
Central Phoenix	26	24	
Dysart	23	21	
Falcon Field	23	21	
Fountain Hills	32	30	
Glendale	27	25	
Humboldt Mountain	43	40	
Phoenix Supersite	26	24	
Mesa	26	24	
North Phoenix	31	29	
Pinal Air Park	25	23	
Pinnacle Peak	37	34	
Queen Valley	36	33	
Rio Verde	37	34	
South Phoenix	26	24	
South Scottsdale	23	21	
Tempe	22	20	
Tonto Nat'l Mon.	34	31	
West Chandler	24	22	
West Phoenix	23	21	
Yuma	33	31	

**CO (CARBON MONOXIDE)**

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Buckeye	0.2	2	
Central Phoenix	1.4	16	
Diablo	0.9	10	
Phoenix Supersite	NOT AVBL	NOT AVBL	
Mesa	0.7	8	
South Phoenix	1.3	15	
West Chandler	0.7	8	
West Phoenix	2.2	25	

**PM-10 (PARTICLES)**

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Buckeye	23.8	21	
Central Phoenix	31	29	
Combs School (Pinal County)	17.1	16	
Durango	47.1	44	
Dysart	23	21	
Glendale	20.7	19	
Higley	NOT AVBL	NOT AVBL	
Maricopa (Pinal County)	18.8	17	
Phoenix Supersite	31.8	29	
Mesa	18.1	17	
North Phoenix	16.2	15	
South Phoenix	NOT AVBL	NOT AVBL	
South Scottsdale	18.1	17	
Tempe	19.5	18	
West Chandler	20.3	19	
West Forty Third	39.7	36	
West Phoenix	39.2	36	
Zuni Hills	10.7	9	

**PM-2.5 (PARTICLES)**

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
-----------	-------------------------	---------	----------------

Diablo	11.1	46	
Durango	18.8	65	
Glendale	11.9	50	
Phoenix Supersite	9.3	39	
Mesa	8.8	37	
North Phoenix	9.9	41	
South Phoenix	NOT AVBL	NOT AVBL	
Tempe	11	46	
West Phoenix	20.8	69	

## DESCRIPTION OF LOCAL AIR POLLUTANTS IN DETAIL



### O3 (OZONE):

Description –

This is a secondary pollutant that is formed by the reaction of other primary pollutants (precursors) such as VOCs (volatile organic compounds) and NOx (Nitrogen Oxides) in the presence of sunlight.

Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NOx is emitted from motor vehicles, power plants, and other sources of combustion.

Potential health impacts – Exposure to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other effects include decrease in lung function, chest pain, and cough.

Unit of measurement – Parts per billion (ppb).

Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)

Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.

### CO (CARBON MONOXIDE):

Description – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely.

Sources – In cities, as much as 95 percent of all CO emissions emanate from automobile exhaust. Other sources include industrial processes, non-transportation fuel combustion, and natural sources such as wildfires. Peak concentrations occur in colder winter months.

Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.

Unit of measurement – Parts per million (ppm).

Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)

Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

### PM-10 & PM-2.5 (PARTICLES):

Description – The term “particulate matter” (PM) includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as “fine” particles and are responsible for many visibility degradations such as the “Valley Brown Cloud” (see <http://www.phoenixvis.net/>). Particles with diameters between 2.5 and 10 micrometers are referred to as “coarse”.

[Sources](#) – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.

[Potential health impacts](#) – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis.

[Units of measurement](#) – Micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

[Averaging interval](#) – 24 hours (midnight to midnight).

[Reduction tips](#) – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.

*Updated 8/11/2016*