



### AIR QUALITY FORECAST FOR Wednesday, March 26, 2014

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  <b>NOTICES</b> (*SEE BELOW FOR DETAILS)	YESTERDAY <u>Mon 03/24/2014</u>	TODAY <u>Tue 03/25/2014</u>	TOMORROW <u>Wed 03/26/2014</u>	EXTENDED <u>Thu 03/27/2014</u>
<b>AIR POLLUTANT</b>	Highest AQI Reading/Site (*Preliminary data only*)		<b>PM-10 High Pollution Advisory</b>  <b>Dust</b>	
<b>O3*</b>	64 Cave Creek	67 <i>Moderate</i>	54 <i>Moderate</i>	46 <i>Good</i>
<b>CO*</b>	11 West Phoenix	8 <i>Good</i>	7 <i>Good</i>	8 <i>Good</i>
<b>PM-10*</b>	50 Durango	51 <i>Moderate</i>	105 <i>Unhealthy for Sensitive Groups</i>	53 <i>Moderate</i>
<b>PM-2.5*</b>	66 Durango	45 <i>Good</i>	57 <i>Moderate</i>	30 <i>Good</i>

\* O3 = Ozone    CO = Carbon Monoxide    PM-10 = Particles 10 microns & smaller    PM-2.5 = Particles smaller than 2.5 microns

\*\*"Ozone Health Watch" means that the highest concentration of OZONE may approach the federal health standard.

"PM-10 or PM-2.5 Health Watch" means that the highest concentration of PM-10 or PM-2.5 may approach the federal health standard.

"High Pollution Advisory" means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.

"DUST" means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

### Health Statements

Tuesday, 03/25/2014	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
Wednesday, 03/26/2014	Active children and adults and people with respiratory disease such as asthma should limit prolonged exertion outdoors.

### SYNOPSIS AND DISCUSSION

#### **...A PM-10 HIGH POLLUTION ADVISORY HAS BEEN ISSUED FOR WEDNESDAY...**

The weather system that will bring winds to Arizona has strengthened a little more. Phoenix could see sustained winds between 15 and 25 mph at times with gusts as high as 35 mph. This is more than enough to generate blowing dust locally. In addition, we anticipate dust from dry deserts to the west (Yuma/southern California). We can lean on any precipitation to help minimize impacts as they disturbance will be dry. Erring on the side of caution, we are going with a High Pollution Advisory for Wednesday as it is highly possible that PM10 concentrations could exceed the standard. Wind conditions improve Thursday and dust levels should also settle into the lower Moderate range.

Daytime highs are expected to briefly fall into the lower 70 on Thursday, but rapidly warm to the upper 80s by Sunday.

Check back tomorrow for more. Until then, have a good day! -J.Paul

MONITORING SITE MAPS	
INTERACTIVE MAPS	<a href="http://alert.fcd.maricopa.gov/alert/Google/v3/air.html">http://alert.fcd.maricopa.gov/alert/Google/v3/air.html</a> <a href="http://www.airnow.gov/">http://www.airnow.gov/</a>

### POLLUTION MONITOR READINGS FOR Monday, March 24, 2014

#### **O3 (OZONE)**

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake	58	49	
Apache Junction	51	43	
Blue Point	60	51	
Buckeye	51	43	
Casa Grande	57	48	
Cave Creek	64	64	
Central Phoenix	55	47	
Dysart	58	49	
Falcon Field	58	49	
Fountain Hills	NOT AVBL	NOT AVBL	NOT AVBL
Glendale	59	50	
Humboldt Mountain	14	12	
Phoenix Supersite	57	48	
Mesa	59	50	
North Phoenix	59	50	
Pinal Air Park	NOT AVBL	NOT AVBL	NOT AVBL
Pinnacle Peak	62	58	
Queen Valley	56	47	
Rio Verde	51	43	
South Phoenix	59	50	
South Scottsdale	53	45	
Tempe	54	46	
Tonto Nat'l Mon.	54	46	
West Chandler	55	47	
West Phoenix	58	49	
Yuma	64	64	

## CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Buckeye	0.2	2	
Central Phoenix	0.6	7	
Dysart	0.3	3	
Glendale	0.6	7	
Greenwood	0.9	10	
Phoenix Supersite	0.7	8	
Mesa	0.6	7	
North Phoenix	0.5	6	
South Phoenix	0.7	8	
South Scottsdale	0.8	9	
Tempe	0.6	7	
West Chandler	0.7	8	
West Phoenix	1.0	11	

## PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Buckeye	48.4	45	
Central Phoenix	29.8	28	
Combs School (Pinal County)	50.8	47	
Durango	54.0	50	
Dysart	32.5	30	
Glendale	29.1	27	
Greenwood	51.3	47	
Higley	36.1	33	
Maricopa (Pinal County)	50.8	47	
Phoenix Supersite	28.6	26	
Mesa	34.0	31	
North Phoenix	27.9	26	
South Phoenix	37.2	34	
South Scottsdale	27.2	25	
Tempe	36.5	34	
West Chandler	30.2	28	
West Forty Third	46.3	43	
West Phoenix	38.8	36	
Zuni Hills	24.5	23	

## PM-2.5 (PARTICLES)

(Some data derived from light-scattering equipment)

For maps go to: <http://www.airnow.gov/>

SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Durango	19.1	66	
Glendale	8.2	34	
Phoenix Supersite	7.0	29	
Mesa	9.1	38	
North Phoenix	8.3	35	
South Phoenix	11.5	48	
Tempe	8.5	35	
West Phoenix	10.4	43	

## 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 heat and 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 (ug/m3)

Averaging interval – 24 hours (midnight to midnight).

Reduction tips – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.