

[\\*LINK TO 2012 AIR POLLUTION EXCEEDANCE GRAPH\\*](#)

**AIR QUALITY FORECAST FOR WEDNESDAY, MAY 16, 2012**

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 <a href="#">MON 05/14/2012</a>	TODAY <a href="#">TUE 05/15/2012</a>	TOMORROW <a href="#">WED 05/16/2012</a>	EXTENDED <a href="#">THU 05/17/2012</a>
<b>NOTICES</b> (*SEE BELOW FOR DETAILS)	<b>OZONE HEALTH WATCH</b>  <b>PM-2.5 HEALTH WATCH</b>	<b>OZONE HEALTH WATCH EXTENSION</b>	<b>NONE</b>	<b>NONE</b>
AIR POLLUTANT	Highest AQI Reading/Site (Preliminary data only)			
<b>O3*</b>	<b>140</b> <b>NORTH PHOENIX</b>	<b>90</b> <b>MODERATE</b>	<b>87</b> <b>MODERATE</b>	<b>77</b> <b>MODERATE</b>
<b>CO*</b>	<b>07</b> <b>CENTRAL &amp; WEST PHOENIX AND GREENWOOD</b>	<b>09</b> <b>GOOD</b>	<b>05</b> <b>GOOD</b>	<b>05</b> <b>GOOD</b>
<b>PM-10*</b>	<b>59</b> <b>DURANGO</b>	<b>47</b> <b>GOOD</b>	<b>43</b> <b>GOOD</b>	<b>45</b> <b>GOOD</b>
<b>PM-2.5*</b>	<b>82</b> <b>DURANGO</b>	<b>50</b> <b>GOOD</b>	<b>31</b> <b>GOOD</b>	<b>34</b> <b>GOOD</b>

\* 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 message for Tuesday May 15: Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.**

**Health message for Wednesday May 16: Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.**

**Synopsis and Discussion**

**AN OZONE HEALTH WATCH REMAINS IN EFFECT TODAY**

**OZONE:** Local ozone levels reached their highest readings so this far this season on Monday but ozone production was likely augmented by combustion by-products contained within the dense blanket of smoke that arrived overhead around 1:00 p.m. yesterday. Gusty winds currently in progress should steer most of any additional smoke away from the metro area today. As of noon hourly ozone readings were elevated over much of the forecast area and at 78 parts per billion were in excess of the 8-hour health standard at the Humboldt Mountain site; as a result the Health Watch issued for today will remain in effect. A westerly wind regime is forecast to resume over the area by Wednesday afternoon and under normal circumstances local ozone levels would subside into the mid-moderate range of the Air Quality Index or lower. However, with the potential for additional – but much less serious – smoke intrusions, highest forecast AQI levels will be set at just below health watch criteria for at least one more day.

**PARTICLES:** Low-level winds are forecast to keep the bulk of smoke from Arizona wildfires out of the Valley the next few days although overnight drainage flow may channel some over portions of the metro area. A strong ridge aloft will remain over Arizona the next few days although a weak disturbance will move west to east over the northern portion of the state today and Wednesday. On Friday the southern end of a sizeable trough in the mid-latitude storm track will likely bring a significant increase in winds to the Valley and some areas of blowing dust are possible during the afternoon.

MONITORING SITE MAPS: STATIC MAP - <http://www.azdeq.gov/enviro/air/monitoring/images/map.jpg>

INTERACTIVE MAPS - <http://156.42.96.39/alert/Google/air.html>

<http://www.airnow.gov/>



**POLLUTION MONITOR READINGS FOR MONDAY, MAY 14, 2012**



**O3 (OZONE)**

Info on current 8-hour ozone standard: [http://www.epa.gov/air/ozonepollution/pdfs/2008\\_03\\_aqi\\_changes.pdf](http://www.epa.gov/air/ozonepollution/pdfs/2008_03_aqi_changes.pdf)

For archived AQI maps go to: <http://www.airnow.gov/index.cfm?action=airnow.maps>

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Alamo Lake (La Paz County)	70	84	Yellow
Apache Junction (Pinal County)	67	74	Yellow
Blue Point	76	101	Orange
Buckeye	78	106	Orange
Casa Grande (Pinal County)	73	93	Yellow
Cave Creek	80	111	Orange
Central Phoenix	84	122	Orange
Dysart	79	109	Orange
Falcon Field	68	77	Yellow
Fountain Hills	83	119	Orange
Glendale	88	132	Orange
Humboldt Mountain	84	122	Orange
North Phoenix	91	140	Orange
Phoenix Supersite	83	119	Orange
Pinal Air Park (Pinal County)	71	87	Yellow
Pinnacle Peak	NOT AVBL	NOT AVBL	NOT AVBL
Queen Valley (Pinal County)	72	90	Yellow
Rio Verde	72	90	Yellow
South Phoenix	87	129	Orange
South Scottsdale	81	114	Orange
Tempe	73	93	Yellow
Tonto Nat'l Mon. (Gila County)	NOT AVBL	NOT AVBL	NOT AVBL
West Chandler	79	109	Orange
West Phoenix	87	129	Orange
Yuma (Yuma County)	68	77	Yellow

## CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Central Phoenix	0.6	07	
Greenwood	0.6	07	
West Phoenix	0.6	07	

## PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (ug/m3)	MAX AQI	AQI COLOR CODE
Apache Junction (Pinal Co.)	35	32	
Buckeye	63	55	
Central Phoenix	58	52	
Combs School(Pinal County)	58	52	
Durango	72	59	
Dysart	50	46	
Glendale	50	46	
Greenwood	64	55	
Higley	47	44	
Maricopa (Pinal County)	72	59	
North Phoenix	53	49	
Phoenix Supersite	48	44	
South Phoenix	60	53	
Tempe	48	44	
West Chandler	42	39	
West Forty Third	59	53	
West Phoenix	53	49	
Zuni Hills	49	45	

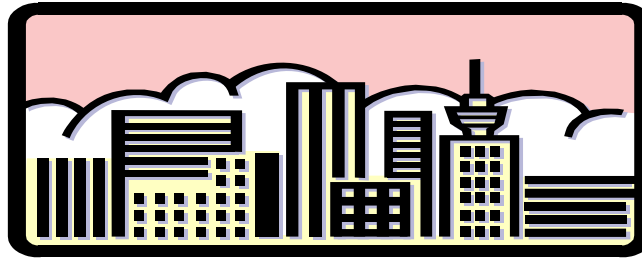
## PM-2.5 (PARTICLES)

(Some data derived from light-scattering equipment)

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

SITE NAME	MAX 24-HR VALUE (ug/m3)	MAX AQI	AQI COLOR CODE
Durango	28.1	82	
Dysart	9.5	31	
Estrella Mountain Park	10.7	35	
Glendale	18.2	58	
North Phoenix	24.5	73	
Phoenix Supersite	19.0	60	
South Phoenix	17.3	55	
Tempe	18.4	58	
Vehicle Emissions Lab	15.9	52	
West Phoenix	22.3	68	

## 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 NO<sub>x</sub> (Nitrogen Oxides) in the presence of heat and sunlight.

Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NO<sub>x</sub> 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/m<sup>3</sup>)

Averaging interval – 24 hours (midnight to midnight).

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

{ Updated 03/23/2010 }