



LINK TO 2012 AIR POLLUTION EXCEEDANCE GRAPH

AIR QUALITY FORECAST FOR WEDNESDAY, AUGUST 29, 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 <u>MON 08/27/2012</u>	TODAY <u>TUE 08/28/2012</u>	TOMORROW <u>WED 08/29/2012</u>	EXTENDED <u>THU 08/30/2012</u>
NOTICES (*SEE BELOW FOR DETAILS)	OZONE HEALTH WATCH	NONE	OZONE HEALTH WATCH	OZONE HEALTH WATCH POSSIBLE
AIR POLLUTANT	Highest AQI Reading/Site (Preliminary data only)			
O3*	101 WEST PHOENIX	74 MODERATE	97 MODERATE	90 MODERATE
CO*	10 WEST PHOENIX	07 GOOD	09 GOOD	08 GOOD
PM-10*	37 SOUTH PHOENIX	36 GOOD	38 GOOD	41 GOOD
PM-2.5*	35 WEST PHOENIX	30 GOOD	36 GOOD	32 GOOD

* 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 August 28: Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.

Health message for Wednesday August 29: Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.

Synopsis and Discussion

AN OZONE HEALTH WATCH HAS BEEN ISSUED FOR WEDNESDAY AUGUST 29

OZONE: After six straight days with local ozone levels in the good range of the Air Quality Index, an astonishing turn-around occurred yesterday. Highest 8-hour average concentrations rose 26 parts per billion (50ppb to 76ppb) and the peak hourly concentration rose 32 parts per billion (57ppb to 89ppb) from Sunday to Monday. Meteorologically speaking, the only real difference between the two days was 10-20 mph afternoon winds on Sunday versus mostly light or calm winds on Monday. This, and the fact that the West Phoenix monitoring site had the highest ozone readings, is proof-positive of an easterly wind-flow so typical during the summer monsoon. This easterly flow is still in effect today and since surface winds are currently not as strong as forecast, elevated ozone levels are likely today. Winds are predicted to be mostly light again on Wednesday – for which another Ozone Health Watch has been issued – then turning westerly and somewhat stronger on Thursday.

PARTICLES: An intrusion of drier air aloft is underway from the east that will greatly limit or prevent summer monsoon thunderstorm activity in proximity to the Phoenix metro area the next few days. As a result particle pollution levels are now forecast to remain in the good range of the Air Quality Index thru Thursday.

MONITORING SITE MAPS: STATIC MAP - <http://www.azdeq.gov/environ/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, AUGUST 27, 2012

O3 (OZONE)

Info on current 8-hour ozone standard: 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)	44	37	
Apache Junction (Pinal County)	52	44	
Blue Point	56	47	
Buckeye	63	61	
Casa Grande (Pinal County)	57	48	
Cave Creek	59	50	
Central Phoenix	69	80	
Dysart	65	67	
Falcon Field	54	46	
Fountain Hills	57	48	
Glendale	66	71	
Humboldt Mountain	56	47	
North Phoenix	71	87	
Phoenix Supersite	72	90	
Pinal Air Park (Pinal County)	57	48	
Pinnacle Peak	63	61	
Queen Valley	60	51	
Rio Verde	57	48	
South Phoenix	73	93	
South Scottsdale	62	58	
Tempe	64	64	
Tonto Nat'l Mon.	55	47	
West Chandler	69	80	
West Phoenix	76	101	
Yuma (Yuma County)	51	43	

CO (CARBON MONOXIDE)			
SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Central Phoenix	0.3	03	
Greenwood	0.8	09	
West Phoenix	0.9	10	

PM-10 (PARTICLES)			
SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Apache Junction (Pinal County)	15	14	
Buckeye	27	25	
Central Phoenix	26	24	
Combs School (Pinal County)	40	37	
Durango	40	37	
Dysart	17	16	
Glendale	20	19	
Greenwood	36	33	
Higley	33	31	
Maricopa (Pinal County)	38	35	
North Phoenix	15	14	
Phoenix Supersite	22	20	
South Phoenix	29	27	
Tempe	24	22	
West Chandler	26	24	
West Forty Third	40	37	
West Phoenix	26	24	
Zuni Hills	18	17	

PM-2.5 (PARTICLES)			
SITE NAME	MAX 24-HR VALUE (µg/m3)	MAX AQI	AQI COLOR CODE
Durango	9.9	32	
Dysart	4.2	14	
Estrella Mountain Park	4.5	15	
Glendale	5.0	16	
North Phoenix	6.3	20	
Phoenix Supersite	4.8	16	
South Phoenix	5.9	19	
Tempe	6.8	22	
Vehicle Emissions Lab	3.4	11	
West Phoenix	10.8	35	

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.

{ Updated 03/23/2010 }