



P I N A L ♦ C O U N T Y







**\*UPDATED\* FORECAST**

GOOD (0-50)	MODERATE (51-100)	UNHEALTHY FOR SENSITIVE GROUPS (101-150)	UNHEALTHY (151-200)	VERY UNHEALTHY (201-300)	HAZARDOUS (301-500)
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**AIR QUALITY FORECAST FOR SUNDAY, MAY 20 AND MONDAY, MAY 21, 2012**

This forecast is updated by 1:00 p.m. Monday through Friday and as needed (AQI Forecast on [Twitter](#) – see tables below for location specific Twitters)

Valid for areas within Pinal County Arizona

	Highest AQI value/Site in Pinal County	Highest AQI forecasted value (see tables below for forecasts by monitoring location)			
	YESTERDAY SAT 5/19/12	TODAY SUN 5/20/12	TOMORROW MON 5/21/12	EXTENDED TUE 5/22/12	EXTENDED WED 5/23/12
OZONE	104 QUEEN VALLEY	110 UNHEALTHY FOR SENSITIVE GROUPS	95 MODERATE	80 MODERATE	70 MODERATE
PM-10*	61** STANFIELD	55** MODERATE	65** MODERATE	70** MODERATE	100** MODERATE
HEALTH WATCH/ ADVISORY	OZONE HEALTH WATCH 	OZONE HPA 	OZONE HEALTH WATCH 	NONE	PM10 HEALTH WATCH POSSIBLE  BLOWING DUST

\*PM-10 = Particles 10 microns and smaller

\*\*Excludes Cowtown monitor. See following page for Cowtown forecast.

“[Ozone Health Watch](#)” means that the highest concentration of OZONE may approach the federal health standard.

“[PM-10 Health Watch](#)” means that the highest concentration of PM-10 may approach the federal health standard.

“[High Pollution Advisory](#)” (HPA) means that the highest concentration of OZONE or PM-10 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 Sunday, May 20 and Monday, May 21, 2012: Active children, adults and people with lung disease, such as asthma, should reduce prolonged or heavy exertion outdoors.**

**Discussion**

Updated Sunday, May 20, 2012 at 12:15 p.m.

**\*\* OZONE HIGH POLLUTION ADVISORY (HPA) IN EFFECT SUNDAY, MAY 20, 2012 \*\***

**\*\* OZONE HEALTH WATCH IN EFFECT MONDAY, MAY 21<sup>ST</sup> \*\***

Favorable transport winds from southern California and the Phoenix metropolitan area helped the Queen Valley monitor exceed the health standard for ozone on Saturday. Unfortunately the ozone levels today are higher compared to the same time yesterday. Combine that with light winds, abundant sunshine and above normal temperatures and higher ozone levels are expected today.

**Therefore an Ozone High Pollution Advisory (HPA) has been issued for today (Sunday 5/20/12).** Anyone with respiratory and/or heart ailments should limit outdoor activities during the afternoon/evening hours when the ozone levels are at their highest.

The ozone levels should drop a bit on Monday due to slightly stronger winds which will help disperse the ozone. Therefore the Ozone Health Watch will remain in effect on Monday.

An approaching upper level low pressure system is expected to bring breezy to gusty winds on Wednesday. We'll have to keep an eye on that system to see if it will be necessary to issue a PM10 High Pollution Advisory (HPA) or Health Watch. Stay tuned.

Forecaster – S. DiBiase.

**COWTOWN**

(Twitter: [Cowtown AQI](#))

	<b>YESTERDAY SAT 5/19/12</b>	<b>TODAY AQI FORECAST SUN 5/20/12</b>	<b>TOMORROW AQI FORECAST MON 5/21/12</b>	<b>EXTENDED AQI FORECAST TUE 5/22/12</b>	<b>EXTENDED AQI FORECAST WED 5/23/12</b>
<b>PM-10*</b>	118	120	110	105	120

[HOURLY MONITORING DATA](#) (Draft, preliminary data - subject to change)  
[MONITORING NETWORK MAP](#) [YESTERDAY'S AQI LEVELS](#)

**AIR QUALITY FORECAST BY LOCATION FOR  
PM-10 (PARTICLES)**

SITE NAME	TODAY AQI FORECAST SUN 5/20/12	TOMORROW AQI FORECAST MON 5/21/12	EXTENDED AQI FORECAST TUE 5/22/12	EXTENDED AQI FORECAST WED 5/23/12
<b>Apache Junction</b> (Twitter: <a href="#">AJ_AQI</a> )	38	40	42	48
<b>Casa Grande</b> (Twitter: <a href="#">CG_AQI</a> )	44	47	49	70
<b>Eleven Mile Corner</b> (Twitter: <a href="#">PC_Housing_AQI</a> )	48	52	55	86
<b>Maricopa</b> (Twitter: <a href="#">MaricopaCity_AQ</a> )	47	55	60	90
<b>San Tan Valley</b> (Twitter: <a href="#">Santan_AQI</a> )	45	55	60	80
<b>Stanfield</b> (Twitter: <a href="#">Stanfield_AQI</a> )	55	65	70	100

**OZONE\***

SITE NAME	TODAY AQI FORECAST SUN 5/20/12	TOMORROW AQI FORECAST MON 5/21/12	EXTENDED AQI FORECAST TUE 5/22/12	EXTENDED AQI FORECAST WED 5/23/12
<b>Apache Junction</b> (Twitter: <a href="#">AJ_AQI</a> )	110	95	80	70
<b>Casa Grande</b> (Twitter: <a href="#">CG_AQI</a> )	95	95	70	60
<b>Pinal Air Park</b> (Twitter: <a href="#">PAP_AQI</a> )	95	85	75	65

**AIR POLLUTANTS IN DETAIL**

**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 and carpool.

### **O<sub>3</sub> 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. The ozone “season” generally occurs during the spring and summer months (April-October) when high temperatures and extended daylight hours create the conditions most conducive to ozone formation.

**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.