



P I N A L ♦ C O U N T Y



# 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 SATURDAY, NOVEMBER 21, THROUGH MONDAY, NOVEMBER 23, 2009

This forecast is updated by 1:00 p.m. Monday through Friday and as needed

(New! AQI Forecast [now on Twitter](#))

Valid for areas within Pinal County Arizona

	Highest AQI value/Site	Highest AQI forecasted value			
	YESTERDAY THU 11/19/09	TODAY FRI 11/20/09	TOMORROW SAT 11/21/09	EXTENDED SUN 11/22/09	EXTENDED MON 11/23/09
OZONE	33 CASA GRANDE	38 GOOD	36 GOOD	32 GOOD	33 GOOD
PM-10*	79** ELEVEN MILE CORNER	80** MODERATE	72** MODERATE	65** MODERATE	78** MODERATE
HEALTH WATCH/ ADVISORY	NONE	NONE	NONE	NONE	NONE

\*PM-10 = Particles 10 microns and smaller

\*\*Excludes Cowtown monitor. See following page for Cowtown report/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 Saturday November 21 through Monday, November 23: [Active children, adults and people with lung disease, such as asthma, should consider reducing prolonged or heavy exertion outdoors.](#)**

## Discussion

Updated Friday, November 20, 2009 at 11:30 a.m.

The quiet weather continues this weekend. A weak disturbance will move through to our north. The only effect for the local area will be some thin, high clouds and a minor drop in temperatures on Sunday. Daytime high temperatures will reach the mid 70s on Saturday (low 70s on Sunday) with morning lows around 40 degrees.

The PM<sub>10</sub> levels will remain in the seasonal range over the weekend which is in the low/mid moderate AQI category. No precipitation is expected over the next week or so. Unfortunately that will mean the PM<sub>10</sub> levels will continue to reach the middle to upper range of the moderate AQI category.

A friendly reminder, we can all play a part in reducing our dust causing activities. Stay off of unpaved roads if you can. If you have to drive on unpaved roads, please slow down. If you're working on unpaved surfaces, stabilize it with some water.

Forecaster- S. DiBiase

<b>COWTOWN</b>					
	<b>YESTERDAY THU 11/19/09</b>	<b>TODAY FRI 11/20/09</b>	<b>TOMORROW SAT 11/21/09</b>	<b>EXTENDED SUN 11/22/09</b>	<b>EXTENDED MON 11/23/09</b>
<b>PM-10*</b>	<b>69</b>	<b>95</b>	<b>95</b>	<b>90</b>	<b>95</b>

MONITORING SITE MAP:

<http://pinalcountyaz.gov/Departments/AirQuality/Pages/MonitoringNetwork.aspx>

### **POLLUTION MONITOR READINGS FOR**

**THURSDAY, NOVEMBER 19, 2009**

#### **PM-10 (PARTICLES)**

<b>SITE NAME</b>	<b>24-HR VALUE (ug/m<sup>3</sup>)</b>	<b>AQI</b>	<b>AQI COLOR CODE</b>
Casa Grande	56	51	
Cowtown	93	69	
Eleven Mile Corner	112	79	
Maricopa	56	51	
San Tan Valley	82	64	
Stanfield	66	56	

#### **OZONE**

<b>SITE NAME</b>	<b>MAX 8-HR VALUE (PPB)</b>	<b>MAX AQI</b>	<b>AQI COLOR CODE</b>
Apache Junction	37	31	
Casa Grande	39	33	

## 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 ( $\mu\text{g}/\text{m}^3$ )

**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.