



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 7, THROUGH MONDAY, NOVEMBER 9, 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 11/5/09	TODAY FRI 11/6/09	TOMORROW SAT 11/7/09	EXTENDED SUN 11/8/09	EXTENDED MON 11/9/09
OZONE	35 APACHE JUNCTION	38 GOOD	37 GOOD	35 GOOD	37 GOOD
PM-10*	90** ELEVEN MILE CORNER	95** MODERATE	89** MODERATE	80** MODERATE	89** MODERATE
HEALTH WATCH/ ADVISORY	PM10 HEALTH WATCH	PM10 HEALTH WATCH	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 7 through Monday, November 9: [Active children, adults and people with lung disease, such as asthma, should consider reducing prolonged or heavy exertion outdoors.](#)

Discussion

Updated Friday, November 6, 2009 at 12 p.m.

***** PM10 HEALTH WATCH IN EFFECT TODAY (FRIDAY) 11/6/09 *****

A weak upper level low pressure system currently located over Baja California will move eastward just south of the Mexican border. The main effect for the local area will be the clouds which have already arrived. The clouds will help limit the typical afternoon atmospheric mixing which will support the PM₁₀ levels in remaining in the upper range of the moderate AQI category. Therefore the PM₁₀ Health Watch remains in effect today (Friday). People are encouraged to limit their dust causing activities for the remainder of today.

The upper level low pressure system will move out of the area during the second half of Saturday. Some clouds may remain until Sunday but no precipitation is expected with this system. The afternoon high temperatures over the weekend will be in the pleasant range of the mid 80s.

High pressure will build back into the area early next week with high temperatures on Tuesday attempting to reach 90 degrees. Due to the typical break in dust activities during weekends, the PM₁₀ levels are expected to drop slightly to levels below the PM₁₀ Health Watch criteria over the next couple of days (excluding Cowtown). Check back over the weekend to see if there are any changes to the air quality forecast. Until then, enjoy the beautiful temperatures. Forecaster- S. DiBiase

COWTOWN					
	YESTERDAY THU 11/5/09	TODAY FRI 11/6/09	TOMORROW SAT 11/7/09	EXTENDED SUN 11/8/09	EXTENDED MON 11/9/09
PM-10*	91	130	110	120	110

MONITORING SITE MAP:

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

POLLUTION MONITOR READINGS FOR

THURSDAY, NOVEMBER 5, 2009

PM-10 (PARTICLES)

SITE NAME	24-HR VALUE (ug/m ³)	AQI	AQI COLOR CODE
Casa Grande	80	63	
Cowtown	137	91	
Eleven Mile Corner	135	90	
Maricopa	115	80	
Queen Creek (Combs School)	90	68	
Stanfield	77	61	

OZONE

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Apache Junction	41	35	
Casa Grande	40	34	

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.

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_x (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_x 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.