



PINAL COUNTY



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 FRIDAY, SEPTEMBER 3, 2010

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

Valid for areas within Pinal County Arizona

	Highest AQI value/Site in Pinal County	Highest AQI forecasted value (see table below for forecasts by monitoring location)			
		YESTERDAY WED 9/1/10	TODAY THU 9/2/10	TOMORROW FRI 9/3/10	EXTENDED SAT 9/4/10
OZONE	51 APACHE JUNCTION	54 MODERATE	52 MODERATE	51 MODERATE	51 MODERATE
PM-10*	73** STANFIELD	60** MODERATE	75** MODERATE	65** MODERATE	55** MODERATE
HEALTH WATCH/ ADVISORY	NONE	NONE	NONE	NONE	NONE

*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 Friday, September 3, 2010: Active children, adults and people with lung disease, such as asthma, should consider reducing prolonged or heavy exertion outdoors.

Discussion

Updated Thursday, September 2, 2010 at 11:45 a.m.

A trough across the western U.S. will continue to bring warm and dry conditions to the area. A return of some moisture is possible over the holiday weekend but the chances of rainfall appear to be greatest in the eastern portion of the state.

Like yesterday the PM₁₀ levels were elevated again over night and into this morning. A look at wind conditions at several sites across central and western Pinal County shows very light wind conditions for numerous hours. Light winds and poor dispersion lead to hourly PM10 concentrations overnight at Stanfield ranging from 100-480 ug/m³. Similar conditions are expected for Friday. This is reflected in the forecast with several sites approaching the middle of the Moderate category.

Ozone concentrations in Apache Junction reached the Moderate category yesterday and will remain there today and Friday with the warm temperatures and favorable west to east air flow during the afternoon hours. Check back tomorrow for an updated air quality forecast. Forecaster- M. Sundblom

COWTOWN					
(Twitter: Cowtown AQI)					
	YESTERDAY WED 9/1/10	TODAY'S AQI FORECAST THU 9/2/10	TOMORROW AQI FORECAST FRI 9/3/10	EXTENDED AQI FORECAST SAT 9/4/10	EXTENDED AQI FORECAST SUN 9/5/10
PM-10*	46	60	58	63	63

[MONITORING NETWORK MAP](#) [YESTERDAY'S AQI LEVELS](#)

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

SITE NAME	TODAY'S AQI FORECAST THU 9/2/10	TOMORROW AQI FORECAST FRI 9/3/10	EXTENDED AQI FORECAST SAT 9/4/10	EXTENDED AQI FORECAST SUN 9/5/10
Casa Grande (Twitter: CG AQI)	42	43	44	44
Eleven Mile Corner (Twitter: PC Housing AQI)	45	52	48	45
Maricopa (Twitter: MaricopaCity AQ)	43	45	44	44
San Tan Valley (Twitter: Santan AQI)	55	57	50	50
Stanfield (Twitter: Stanfield AQI)	62	75	65	55

OZONE*

SITE NAME	TODAY'S AQI FORECAST THU 9/2/10	TOMORROW AQI FORECAST FRI 9/3/10	EXTENDED AQI FORECAST SAT 9/4/10	EXTENDED AQI FORECAST SUN 9/5/10
Apache Junction (Twitter: AJ_AQI)	55	52	51	51
Casa Grande (Twitter: CG_AQI)	52	49	47	47
Maricopa (Twitter: MaricopaCity_AQ)	48	47	45	45
Pinal Air Park (Twitter: PC_Airpark_AQI)	49	48	46	46
San Tan Valley (Twitter: Santan_AQI)	49	45	43	43

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.