



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)
-------------	-------------------	--	---------------------	--------------------------	---------------------

AIR QUALITY FORECAST FOR SATURDAY, FEBRUARY 4 THROUGH MONDAY, FEBRUARY 6, 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 THU 2/2/12	TODAY FRI 2/3/12	TOMORROW SAT 2/4/12	EXTENDED SUN 2/5/12
OZONE	35 CASA GRANDE	33 GOOD	33 GOOD	33 GOOD	34 GOOD
PM-10*	64** STANFIELD	60** MODERATE	55** MODERATE	59** MODERATE	62** 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 Saturday, February 04 through Monday, February 06, 2012: Active children, adults and people with lung disease, such as asthma, should consider reducing prolonged or heavy exertion outdoors.

Discussion

Updated Friday, February 03, 2012 at 11:15 a.m.

The low pressure system which gave us the gusty winds yesterday will persist for the next day or so but continue to weaken. Accordingly, much less windy conditions are expected today as the upper level system degrades.

With tight pressure gradients developing on Saturday and Sunday mornings locally breezy conditions are possible for areas in the eastern half of the county. Temperatures behind the cold front will be more seasonal (i.e. 60s) today and Saturday, though it will be short lived as high temperatures rebound over the weekend and reach 70 by Sunday as weak upper high pressure builds into the state. Forecaster – B. Farrell

COWTOWN					
(Twitter: Cowtown AQI)					
	YESTERDAY THU 2/2/12	TODAY AQI FORECAST FRI 2/3/12	TOMORROW AQI FORECAST SAT 2/4/12	EXTENDED AQI FORECAST SUN 2/5/12	EXTENDED AQI FORECAST MON 2/6/12
PM-10*	74	70	65	68	70

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

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

SITE NAME	TODAY AQI FORECAST FRI 2/3/12	TOMORROW AQI FORECAST SAT 2/4/12	EXTENDED AQI FORECAST SUN 2/5/12	EXTENDED AQI FORECAST MON 2/6/12
Apache Junction (Twitter: AJ AQI)	40	38	39	45
Casa Grande (Twitter: CG AQI)	50	48	49	50
Eleven Mile Corner (Twitter: PC Housing AQI)	55	50	55	54
Maricopa (Twitter: MaricopaCity AQ)	55	50	55	53
San Tan Valley (Twitter: Santan AQI)	55	50	50	50
Stanfield (Twitter: Stanfield AQI)	60	55	59	62

OZONE*

SITE NAME	TODAY AQI FORECAST FRI 2/3/12	TOMORROW AQI FORECAST SAT 2/4/12	EXTENDED AQI FORECAST SUN 2/5/12	EXTENDED AQI FORECAST MON 1/6/12
Apache Junction (Twitter: AJ AQI)	33	33	33	34
Casa Grande (Twitter: CG AQI)	33	31	32	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.

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.