



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 THURSDAY, DECEMBER 13, 2018

This forecast is updated by 10:00 a.m. Monday through Friday and as needed (AQI Forecast on [Twitter](#) – see tables below for location specific Twitters)

	Highest AQI value/Site in Pinal County	Highest AQI forecasted value (see tables below for forecasts by monitoring location)				
		YESTERDAY TUE 12/11/18	TODAY WED 12/12/18	TOMORROW THU 12/13/18	EXTENDED FRI 12/14/18	EXTENDED SAT 12/15/18
OZONE	26 APACHE JUNCTION	34 GOOD	35 GOOD	37 GOOD	39 GOOD	38 GOOD
PM _{2.5}	35 CASA GRANDE	42 GOOD	42 GOOD	46 GOOD	45 GOOD	46 GOOD
PM ₁₀	44** SAN TAN VALLEY	40** GOOD	45** GOOD	50** GOOD	48** GOOD	45** GOOD
HEALTH WATCH/ ADVISORY*	NONE	NONE	NONE	NONE	NONE	NONE

** Excludes the Hidden Valley Monitor, see Hidden Valley PM₁₀ table below

PM₁₀ = Particles 10 microns and smaller; PM_{2.5} = Particles 2.5 microns and smaller

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

“[PM_{2.5} and/or PM₁₀ Health Watch](#)” means that the highest concentration of PM_{2.5} and/or PM₁₀ may approach the federal health standard.

“[High Pollution Advisory](#)” (HPA) means that the highest concentration of OZONE, PM_{2.5} or PM₁₀ may exceed the federal health standard.

“[DUST](#)” means that short periods of high PM₁₀ concentrations caused by outflow from thunderstorms are possible.

Health message for Wednesday-Thursday, December 12-13, 2018 No health impacts expected.

Discussion

Updated Wednesday, December 12, 2018

A dry cold front will move through later tonight and behind it a pressure gradient will setup and bring breezy easterly winds on Thursday and early Friday. Some pockets of blowing dust is expected, however still relatively low levels of PM₁₀ have are forecast due to the recent rains. Particulates will slowly rise over the next several days, though they have a bit of distance to cover in order to approach the moderate AQI category. Recent rainfall should continue to constrain any major dust problems thru most of the work week so forecast is for the PM₁₀ and PM_{2.5} levels to remain in the good category. Ozone will also stay in the good AQI category for the week.

Not much expected weather-wise this upcoming weekend with seasonal temperatures and occasional high clouds moving through the area. An upper level low pressure system is forecast to move into the area early next week and bring a chance for precipitation. Stay tuned.

Stay up to date with current air pollution levels by checking the near real-time PM₁₀, PM_{2.5} and ozone levels online at

<http://www.pinalcountyz.gov/AirQuality/Pages/AirQualityReport.aspx>.

Forecaster: S. DiBiase

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

	Yesterday's Daily Maximum AQI @ Hidden Valley	HIDDEN VALLEY PM₁₀ AIR QUALITY FORECAST				
SITE NAME	TUE 12/11/18	TODAY AQI FORECAST WED 12/12/18	TOMORROW AQI FORECAST THU 12/13/18	EXTENDED AQI FORECAST FRI 12/14/18	EXTENDED AQI FORECAST SAT 12/15/18	EXTENDED AQI FORECAST SUN 12/16/18
Hidden Valley (Twitter: HV AQI)	37	32	45	47	45	44

AIR QUALITY FORECAST FOR
PM_{2.5} (PARTICLES)

SITE NAME	TODAY AQI FORECAST WED 12/12/18	TOMORROW AQI FORECAST THU 12/13/18	EXTENDED AQI FORECAST FRI 12/14/18	EXTENDED AQI FORECAST SAT 12/15/18	EXTENDED AQI FORECAST SUN 12/16/18
Casa Grande (Twitter: CG_AQI)	42	40	42	44	46
Hidden Valley (Twitter: HV_AQI)	40	42	46	45	45

AIR QUALITY FORECAST BY LOCATION FOR
PM₁₀ (PARTICLES)

SITE NAME	TODAY AQI FORECAST WED 12/12/18	TOMORROW AQI FORECAST THU 12/13/18	EXTENDED AQI FORECAST FRI 12/14/18	EXTENDED AQI FORECAST SAT 12/15/18	EXTENDED AQI FORECAST SUN 12/16/18
Apache Junction (Twitter: AJ_AQI)	14	20	21	18	16
Casa Grande (Twitter: CG_AQI)	25	28	30	35	35
Eleven Mile Corner (Twitter: PC_Housing_AQI)	28	33	37	38	35
Eloy (Twitter: Eloy_AQI)	25	30	34	35	33
Maricopa (Twitter: Maricopa_City_AQI)	30	38	42	40	38
Pinal Air Park (Twitter: PAP_AQI)	17	19	20	18	15
San Tan Valley Twitter: Santan_AQI	40	45	44	43	42
Stanfield (Twitter: Stanfield_AQI)	33	45	50	48	45

AIR QUALITY FORECAST BY LOCATION FOR OZONE

SITE NAME	TODAY AQI FORECAST WED 12/12/18	TOMORROW AQI FORECAST THU 12/13/18	EXTENDED AQI FORECAST FRI 12/14/18	EXTENDED AQI FORECAST SAT 12/15/18	EXTENDED AQI FORECAST SUN 12/16/18
Apache Junction (Twitter: AJ_AQI)	34	35	36	37	37
Casa Grande (Twitter: CG_AQI)	34	36	36	37	36
Pinal Air Park (Twitter: PAP_AQI)	34	35	37	39	38

* The symbols used for the Health Watch/Advisory are shown below



- Symbol for Health Watch (HW)



- Symbol for High Pollution Advisory (HPA)

AIR POLLUTANTS IN DETAIL

PM₁₀ & 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/m³)

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.