



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 SATURDAY-MONDAY, APRIL 21-23, 2018

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)

	Highest AQI value/Site in Pinal County	Highest AQI forecasted value (see tables below for forecasts by monitoring location)				
		YESTERDAY THU 4/19/18	TODAY FRI 4/20/18	TOMORROW SAT 4/21/18	EXTENDED SUN 4/22/18	EXTENDED MON 4/23/18
OZONE	58 MULTIPLE SITES	90 MODERATE	85 MODERATE	95 MODERATE	95 MODERATE	88 MODERATE
PM _{2.5}	87 HIDDEN VALLEY	85 MODERATE	75 MODERATE	80 MODERATE	77 MODERATE	70 MODERATE
PM ₁₀	725** STANFIELD	75** MODERATE	55** MODERATE	55** MODERATE	65** MODERATE	67** MODERATE
HEALTH WATCH/ ADVISORY*	PM ₁₀ HPA  BLOWING DUST	OZONE HEALTH WATCH 	NONE	OZONE HEALTH WATCH 	OZONE HEALTH WATCH 	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 Friday-Monday, April 20-23, 2018: Active children, adults and people with lung disease, such as asthma, should reduce outdoor activities.

Discussion

Updated Friday, April 20, 2018

**** OZONE HEALTH WATCH FRIDAY, APRIL 20, 2018 ****

**** OZONE HEALTH WATCH SUNDAY AND MONDAY,
APRIL 22-23, 2018 ****

The past couple of Thursdays featured wind events and PM₁₀ concentrations that reached the hazardous category on the AQI scale in Stanfield and very unhealthy and Unhealthy for Sensitive Groups at various other locations in Pinal County. This morning has started out hazy due to leftover particulates from yesterday's dust event which will eventually clear out as breeziness takes over this afternoon. The ozone levels today will be influenced from transported ozone and its precursors from yesterday's event. The ozone levels are expected to approach the health standard, therefore the ozone health watch remains in effect today.






The upper level low pressure system responsible for yesterday's dust event will slowly move to the east today and bring the aforementioned breezy conditions this afternoon. That said, the winds won't be as strong and so less in the way of blowing dust is expected today, thus lower forecasted PM₁₀ levels. High pressure will build into the area this weekend and bring afternoon high temperatures near 90 on Saturday and low 90s on Sunday and Monday. The morning meteorological conditions will be favorable for elevated PM₁₀ levels at Hidden Valley (upper moderate to low unhealthy for sensitive groups).

The ozone levels over the next several days will be in the moderate AQI category and are forecasted to approach the health standard Sunday and Monday. Saturday's ozone levels are expected to drop a bit due to cloud cover associated with a weak system that will move by to our south. The ozone health watch issued for today remains in effect and another one has been issued for Sunday and Monday.

You can 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	THU 4/19/18	TODAY AQI FORECAST FRI 4/20/18	TOMORROW AQI FORECAST SAT 4/21/18	EXTENDED AQI FORECAST SUN 4/22/18	EXTENDED AQI FORECAST MON 4/23/18	EXTENDED AQI FORECAST TUE 4/24/18
Hidden Valley (Twitter: HV AQI)	104	75	95	110	100	95
HEALTH WATCH/ ADVISORY*	PM ₁₀ HPA  <i>BLOWING DUST</i>	NONE	PM ₁₀ HW 	PM ₁₀ HPA 	PM ₁₀ HW 	PM ₁₀ HW POSSIBLE 

<u>AIR QUALITY FORECAST FOR PM_{2.5} (PARTICLES)</u>					
SITE NAME	TODAY AQI FORECAST FRI 4/20/18	TOMORROW AQI FORECAST SAT 4/21/18	EXTENDED AQI FORECAST SUN 4/22/18	EXTENDED AQI FORECAST MON 4/23/18	EXTENDED AQI FORECAST TUE 4/24/18
Casa Grande (Twitter: CG AQI)	65	48	50	45	46
Hidden Valley (Twitter: HV AQI)	85	75	80	70	70

AIR QUALITY FORECAST BY LOCATION FOR
PM₁₀ (PARTICLES)

SITE NAME	TODAY AQI FORECAST FRI 4/20/18	TOMORROW AQI FORECAST SAT 4/21/18	EXTENDED AQI FORECAST SUN 4/22/18	EXTENDED AQI FORECAST MON 4/23/18	EXTENDED AQI FORECAST TUE 4/24/18
Apache Junction (Twitter: AJ AQI)	30	25	23	25	26
Casa Grande (Twitter: CG AQI)	49	48	47	49	50
Eleven Mile Corner (Twitter: PC Housing AQI)	52	50	48	50	52
Eloy (Twitter: Eloy AQI)	47	45	44	46	47
Maricopa (Twitter: Maricopa City AQ)	53	47	45	48	49
Pinal Air Park (Twitter: PAP AQI)	44	40	37	40	42
San Tan Valley Twitter: Santan AQI	52	50	48	52	55
Stanfield (Twitter: Stanfield AQI)	75	55	55	65	67

AIR QUALITY FORECAST BY LOCATION FOR
OZONE

SITE NAME	TODAY AQI FORECAST FRI 4/20/18	TOMORROW AQI FORECAST SAT 4/21/18	EXTENDED AQI FORECAST SUN 4/22/18	EXTENDED AQI FORECAST MON 4/23/18	EXTENDED AQI FORECAST TUE 4/24/18
Apache Junction (Twitter: AJ AQI)	90	85	95	95	88
Casa Grande (Twitter: CG AQI)	85	80	85	85	80
Pinal Air Park (Twitter: PAP AQI)	80	75	84	85	82

* 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.