



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, NOVEMBER 18-20, 2017

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 11/16/17	TODAY FRI 11/17/17	TOMORROW SAT 11/18/17	EXTENDED SUN 11/19/17	EXTENDED MON 11/20/17	EXTENDED TUE 11/21/17
OZONE	40 CASA GRANDE	42 GOOD	43 GOOD	42 GOOD	43 GOOD	44 GOOD
PM _{2.5}	113 HIDDEN VALLEY	85 MODERATE	65 MODERATE	65 MODERATE	100 MODERATE	110 UNHEALTHY FOR SENSITIVE GROUPS
PM ₁₀	77** STANFIELD	80** MODERATE	75** MODERATE	75** MODERATE	80** MODERATE	82** MODERATE
HEALTH WATCH/ ADVISORY*	NONE	NONE	NONE	NONE	PM _{2.5} HEALTH WATCH 	PM _{2.5} HIGH POLLUTION ADVISORY POSSIBLE 

** 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, November 17-20, 2017: Active children, adults and people with lung disease, such as asthma, should consider reducing outdoor activities.

Discussion




Updated Friday, November 17, 2017

The Hidden Valley PM₁₀ and PM_{2.5} levels on Thursday once again exceeded their respective health standards (33rd day in 2017 for PM₁₀ and 11th for PM_{2.5}). Today is also starting out on the elevated side of particulates at Hidden Valley. The initial PM₁₀ AQI forecast of 85 (mid-range of the moderate AQI scale) has been revised into the Unhealthy for Sensitive Groups category due to the level of elevated PM₁₀ early this morning and the likelihood of the PM₁₀ health standard once again being exceeded at Hidden Valley.

The weather this weekend will feature slightly cooler temperatures with mainly clear skies (some occasional high cloudiness). It’s a tough time of year for particulates due to local dust causing activities such as cotton harvesting and associated vehicle travel on unpaved roads. That said, the PM₁₀ levels this weekend are forecasted to be in the good to mid-range of moderate on the AQI scale in most places with Hidden Valley forecasted to be in the upper range of the moderate AQI category. The PM_{2.5} forecasts for this weekend are in the good to mid-range of the moderate AQI category with ozone forecasted to remain in the good category. High pressure will build into the area again next week, however there’s a quick moving trough that is forecasted to skirt by the Four-Corners area early next week which may delay the high pressure’s influence on the local area.

Early next week the elevated weekday dust causing activities along with the enhanced local dust activities in/around Hidden Valley are expected to influence the particulate levels (PM₁₀ and PM_{2.5}) and so have forecasted a PM₁₀ exceedance and near PM_{2.5} exceedance (100 AQI) at Hidden Valley on Monday. Elsewhere the PM₁₀ levels early next week are forecasted to be in the good to upper range of the moderate AQI category. Unfortunately at this point there still doesn’t appear to be any significant precipitation expected for the foreseeable future. Stay up to date with current air pollution levels by checking out 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](#)

		HIDDEN VALLEY PM₁₀ AIR QUALITY FORECAST				
	Yesterday's Daily Maximum AQI @ Hidden Valley	TODAY AQI FORECAST	TOMORROW AQI FORECAST	EXTENDED AQI FORECAST	EXTENDED AQI FORECAST	EXTENDED AQI FORECAST
SITE NAME	THU 11/16/17	FRI 11/17/17	SAT 11/18/17	SUN 11/19/17	MON 11/20/17	TUE 11/21/17
Hidden Valley (Twitter: HV AQI)	122	110	88	85	110	115
HEALTH WATCH/ ADVISORY*		SAME DAY PM ₁₀ HIGH POLLUTION ADVISORY 	NONE	NONE	PM ₁₀ HIGH POLLUTION ADVISORY 	PM ₁₀ HIGH POLLUTION ADVISORY POSSIBLE 

<u>AIR QUALITY FORECAST FOR PM_{2.5} (PARTICLES)</u>					
SITE NAME	TODAY AQI FORECAST	TOMORROW AQI FORECAST	EXTENDED AQI FORECAST	EXTENDED AQI FORECAST	EXTENDED AQI FORECAST
	FRI 11/17/17	SAT 11/18/17	SUN 11/19/17	MON 11/20/17	TUE 11/21/17
Casa Grande (Twitter: CG AQI)	54	50	50	55	60
Hidden Valley (Twitter: HV AQI)	85	65	65	100	110

AIR QUALITY FORECAST BY LOCATION FOR
PM₁₀ (PARTICLES)

SITE NAME	TODAY AQI FORECAST FRI 11/17/17	TOMORROW AQI FORECAST SAT 11/18/17	EXTENDED AQI FORECAST SUN 11/19/17	EXTENDED AQI FORECAST MON 11/20/17	EXTENDED AQI FORECAST TUE 11/21/17
Apache Junction (Twitter: AJ AQI)	33	30	28	38	41
Casa Grande (Twitter: CG AQI)	55	50	49	57	60
Eleven Mile Corner (Twitter: PC Housing AQI)	65	55	52	60	65
Eloy (Twitter: Eloy AQI)	55	52	51	60	65
Maricopa (Twitter: Maricopa City AQ)	55	50	49	55	60
Pinal Air Park (Twitter: PAP AQI)	47	44	42	50	52
San Tan Valley Twitter: Santan AQI)	51	49	47	55	65
Stanfield (Twitter: Stanfield AQI)	80	75	75	80	82

AIR QUALITY FORECAST BY LOCATION FOR
OZONE

SITE NAME	TODAY AQI FORECAST FRI 11/17/17	TOMORROW AQI FORECAST SAT 11/18/17	EXTENDED AQI FORECAST SUN 11/19/17	EXTENDED AQI FORECAST MON 11/20/17	EXTENDED AQI FORECAST TUE 11/21/17
Apache Junction (Twitter: AJ AQI)	42	43	42	43	44
Casa Grande (Twitter: CG AQI)	41	42	41	43	43
Pinal Air Park (Twitter: PAP AQI)	42	43	42	43	44

* 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.