



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, JULY 28, 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 WED 7/26/17	TODAY THU 7/27/17	TOMMOROW FRI 7/28/17	EXTENDED SAT 7/29/17	EXTENDED SUN 7/30/17
OZONE	51 APACHE JUNCTION, CASA GRANDE	55 MODERATE	50 GOOD	49 GOOD	47 GOOD	50 GOOD
PM _{2.5}	N/A	38 GOOD	35 GOOD	34 GOOD	33 GOOD	45 GOOD
PM ₁₀	32** STANFIELD	34** GOOD	33** GOOD	33** GOOD	32** GOOD	35** 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 Thursday, July 27, 2017: Active children, adults and people with lung disease, such as asthma, should consider reducing outdoor activities.

Health message for Friday, July 28, 2017: No health impacts expected.

Discussion

Updated Thursday, July 27, 2017

Calm winds and local dust causing activities in Hidden Valley contributed to some very high PM₁₀ concentrations early this morning. Thankfully the winds picked up in intensity which helped air dispersion and lowered the PM₁₀ levels. However the damage has already been done to a certain extent and so have bumped up the PM₁₀ forecast for today into the moderate category for Hidden Valley and also increased the PM_{2.5} forecast a bit.

It doesn't appear that Friday morning will be a repeat performance for Hidden Valley and so have kept the Friday's PM₁₀ and PM_{2.5} forecasts in the good AQI category. An increase in chances for storm activity on Friday and into this weekend will help keep the PM₁₀ and PM_{2.5} levels down. Additionally, the active weather should also help keep the ozone levels in check. 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	WED 7/26/17	TODAY AQI FORECAST THU 7/27/17	TOMORROW AQI FORECAST FRI 7/28/17	EXTENDED AQI FORECAST SAT 7/29/17	EXTENDED AQI FORECAST SUN 7/30/17	EXTENDED AQI FORECAST MON 7/31/17
Hidden Valley (Twitter: HV AQI)	27	70	44	43	43	50
HEALTH WATCH/ADVISORY*		NONE	NONE	NONE	NONE	NONE

<u>AIR QUALITY FORECAST FOR PM_{2.5} (PARTICLES)</u>					
SITE NAME	TODAY AQI FORECAST THU 7/27/17	TOMORROW AQI FORECAST FRI 7/28/17	EXTENDED AQI FORECAST SAT 7/29/17	EXTENDED AQI FORECAST SUN 7/30/17	EXTENDED AQI FORECAST MON 7/31/17
Casa Grande (Twitter: CG AQI)	32	33	33	31	32
Hidden Valley (Twitter: HV AQI)	48	35	34	33	45

AIR QUALITY FORECAST BY LOCATION FOR
PM₁₀ (PARTICLES)

SITE NAME	TODAY AQI FORECAST THU 7/27/17	TOMORROW AQI FORECAST FRI 7/28/17	EXTENDED AQI FORECAST SAT 7/29/17	EXTENDED AQI FORECAST SUN 7/30/17	EXTENDED AQI FORECAST MON 7/31/17
Apache Junction (Twitter: AJ AQI)	10	9	8	8	12
Casa Grande (Twitter: CG AQI)	24	23	22	21	25
Eleven Mile Corner (Twitter: PC Housing AQI)	27	26	25	24	26
Maricopa (Twitter: Maricopa City AQ)	34	33	33	32	33
Pinal Air Park (Twitter: PAP AQI)	28	27	25	24	23
San Tan Valley Twitter: Santan AQI)	24	23	23	22	24
Stanfield (Twitter: Stanfield AQI)	32	31	31	30	35

AIR QUALITY FORECAST BY LOCATION FOR
OZONE

SITE NAME	TODAY AQI FORECAST THU 7/27/17	TOMORROW AQI FORECAST FRI 7/28/17	EXTENDED AQI FORECAST SAT 7/29/17	EXTENDED AQI FORECAST SUN 7/30/17	EXTENDED AQI FORECAST MON 7/31/17
Apache Junction (Twitter: AJ AQI)	55	50	49	47	50
Casa Grande (Twitter: CG AQI)	45	50	48	46	47
Pinal Air Park (Twitter: PAP AQI)	44	48	47	45	48

* 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.