PINAL COUNTY

AIR QUALITY INDEX

FORECAST

GOOD (0-50)	MODERATE (51-100)	UNHEALTHY FOR SENSITIVE GROUPS (USG) (101-150)	UNHEALTHY (151-200)	VERY UNHEALTHY (201-300)	HAZARDOUS (301-500)

FOR
TUESDAY, MARCH 28, 2023

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 yesterday	Highest AQI forecasted value					
	SUN 3/26/23	MON 3/27/23	TUES 3/28/23	WED 3/29/23	THURS 3/30/23	FRI 3/31/23	SAT 4/1/23
OZONE	49 Casa Grande Queen Valley	*51*	*53*	*57*	*45*	*51*	*49*
$PM_{2.5}$	15 Casa Grande	*20*	*22*	*25*	*30*	*20*	*22*
PM_{10}	23** Stanfield	*25***	*27***	*30***	*55***	*30***	*35***
					Blowing Dust Possible		

** Excludes the Hidden Valley Monitor, see Hidden Valley PM_{10} table below

HPW - Symbol for **High Pollution Watch (HPW)** – Issued when there is potential for a pollutant to exceed the federal health standard. Issued in advance (2 or more days) as a lookout for potential poor air quality (Above 100 AQI). As the date nears and the confidence in the forecast increases, the High Pollution Watch will be upgraded to a High Pollution Advisory.

HPA - Symbol for **High Pollution Advisory (HPA)** – When it's imminent or there is a high probability for a pollutant to exceed the federal health standard.

AQI and your health | **Air Quality Guide for Ozone** | **Air Quality Guide for Particulates**

Discussion

Updated Monday, March 27, 2023

This week starts with mostly sunny skies, light winds, and below-average temperatures. A brief high-pressure ridge will attempt to pull the temperatures toward the upper 70s/low 80s tomorrow/Wednesday. The next weather system is forecasted to impact our area by Thursday with mostly cloudy skies and strong breezes, mostly over the higher elevations. There is a chance of light rain as well.

The ozone levels barely missed the Moderate level this past weekend, however, with the light winds on a work day (more traffic and associated emissions in the metro area), the ozone levels are expected to step into the lower portion of the Moderate AQI category the next few days.

Particulate levels were in the mid-Good and the forecast remains in that range until Thursday when blowing dust from the windy conditions is expected to cause elevated levels toward the Moderate.

Check back tomorrow for an updated air quality forecast.

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 (HV) PM_{10} AQI FORECAST					
	SUN 3/26/23	MON 3/27/23	TUES 3/28/23	WED 3/29/23	THURS 3/30/23	FRI 3/31/23	SAT 4/1/23
HV PM10 (Twitter: HV_AQI)	17	25	20	40	30	20	25

AIR POLLUTANTS IN DETAIL

PM_{10} & $PM_{2.5}$ (PARTICLES):

Description – The term "particulate matter" (PMS) 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/m^3)

Averaging interval – 24 hours (midnight to midnight).

Reduction tips – Stabilize loose soils, slow down on dirt roads, and carpool.

O_3 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 NOx (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. NOx 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 a decrease in lung function, chest pain, and cough.

Unit of measurement – Parts per million (ppm).

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.