**FORECAST**

<table>
<thead>
<tr>
<th>Highest AQI value/Site in Pinal County</th>
<th>Highest AQI forecasted value (see tables below for forecasts by monitoring location)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TODAY THU 10/4/18</td>
<td>YESTERDAY WED 10/3/18</td>
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<tr>
<td>TOMORROW FRI 10/5/18</td>
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<tr>
<td>EXTENDED SAT 10/6/18</td>
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<td>EXTENDED SUN 10/7/18</td>
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<tr>
<td>EXTENDED MON 10/8/18</td>
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**OZONE**

- **YESTERDAY WED 10/3/18**
  - PINAL AIR PARK: 26 GOOD
- **TODAY THU 10/4/18**
  - PINAL AIR PARK: 45 GOOD
- **TOMORROW FRI 10/5/18**
  - PINAL AIR PARK: 48 GOOD
- **EXTENDED SAT 10/6/18**
  - PINAL AIR PARK: 45 GOOD
- **EXTENDED SUN 10/7/18**
  - PINAL AIR PARK: 40 GOOD
- **EXTENDED MON 10/8/18**
  - PINAL AIR PARK: 41 GOOD

**PM2.5**

- **YESTERDAY WED 10/3/18**
  - CASA GRANDE: 3 GOOD
- **TODAY THU 10/4/18**
  - CASA GRANDE: 38 GOOD
- **TOMORROW FRI 10/5/18**
  - CASA GRANDE: 38 GOOD
- **EXTENDED SAT 10/6/18**
  - CASA GRANDE: 38 GOOD
- **EXTENDED SUN 10/7/18**
  - CASA GRANDE: 36 GOOD
- **EXTENDED MON 10/8/18**
  - CASA GRANDE: 35 GOOD

**PM10**

- **YESTERDAY WED 10/3/18**
  - MULTIPLE SITES: 8 GOOD
- **TODAY THU 10/4/18**
  - MULTIPLE SITES: 24 GOOD
- **TOMORROW FRI 10/5/18**
  - MULTIPLE SITES: 26 GOOD
- **EXTENDED SAT 10/6/18**
  - MULTIPLE SITES: 25 GOOD
- **EXTENDED SUN 10/7/18**
  - MULTIPLE SITES: 26 GOOD
- **EXTENDED MON 10/8/18**
  - MULTIPLE SITES: 28 GOOD

**HEALTH WATCH/ADVISORY**

- **NONE**

**Notes:**

- **Excludes the Hidden Valley Monitor**, see Hidden Valley PM10 table below.
- PM10 = Particles 10 microns and smaller; PM2.5 = Particles 2.5 microns and smaller.
- “Ozone Health Watch” means that the highest concentration of OZONE may approach the federal health standard.
- “PM2.5 and/or PM10 Health Watch” means that the highest concentration of PM2.5 and/or PM10 may approach the federal health standard.
- “High Pollution Advisary” (HPA) means that the highest concentration of OZONE, PM2.5 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-Friday, October 4-5, 2018 No health impacts expected.**
The coldest air so far this autumn will move in over the weekend with afternoon high temperatures struggling to reach 80 degrees! The upper level low responsible for the cooler temperatures will dig southward into the state late Saturday and slowly move through on Sunday. Showers and perhaps a thunderstorm are possible Saturday night and Sunday, especially for areas in northern and eastern Pinal County. The winds will also be on the increase on Sunday as gusts near 30 mph are possible. Thankfully the saturated ground surfaces should minimize the possibility for blowing dust.

The forecasted air quality for all three pollutants (PM$_{10}$, PM$_{2.5}$ and ozone) are in the good AQI category through early next week. Enjoy the beautiful autumn weather and good air quality.

Stay up to date with current air pollution levels by checking the near real-time PM$_{10}$, PM$_{2.5}$ and ozone levels online at [http://www.pinalcountyaz.gov/AirQuality/Pages/AirQualityReport.aspx](http://www.pinalcountyaz.gov/AirQuality/Pages/AirQualityReport.aspx). 

Forecaster: S. DiBiase

<table>
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<tr>
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<th>EXTENDED AQI FORECAST</th>
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<tbody>
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* The symbols used for the Health Watch/Advisory are shown below
AIR POLLUTANTS IN DETAIL

**PM\textsubscript{10} & PM\textsubscript{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/m\textsuperscript{3})

**Averaging interval** – 24 hours (midnight to midnight).

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

**O\textsubscript{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 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.