For Saturday - Monday, July 8th — 10th, 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)

** Excludes the Hidden Valley Monitor, see Hidden Valley table below

- 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.

- 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
High pressure looks to continue to dominate our area for the next two weeks. The temperatures will remain around 110 degrees this weekend before climbing toward 115 by this coming Wednesday.

Because of afternoon breezes, the ozone levels remained in the Good AQI category yesterday and expect to repeat today. Once the ridge moves to the west toward the middle of the state early next week, the winds will alter to mostly westerly-northwesterly which is a contributing factor for increasing ozone. However, the afternoon breezes are forecasted to provide enough windspeed and keep the ozone from reaching the federal standard.

The particulate levels are battling morning and evening stagnation conditions. Hidden Valley saw high PM$_{10}$ levels yesterday and this morning due to light easterly winds, but, like yesterday, does not expect to exceed the federal standard today. Stanfield saw smaller PM$_{10}$ spikes yesterday evening due to light westerly winds which caused the site to reach the Moderate category and expect similar conditions in the next few days.

Have a great weekend. Stay cool.

**Discussion**
Updated Friday, July 7th, 2023

<table>
<thead>
<tr>
<th>Yesterday’s Daily Maximum AQI @ Hidden Valley</th>
<th>HIDDEN VALLEY (HV) PM$_{2.5}$ and 10 AQI FORECAST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>THURS 7/6/23</td>
</tr>
<tr>
<td>HV PM$_{2.5}$</td>
<td>58</td>
</tr>
<tr>
<td>HV PM$_{10}$ (Twitter: HV_AQI)</td>
<td>87</td>
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</tbody>
</table>
**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.