



**\*LINK TO EXCEEDANCE & HEALTH STATEMENT INFO FOR THE 2009-10 & 2008-09 FORECAST SEASONS\***

**AIR QUALITY FORECAST FOR MONDAY, MARCH 22, 2010**

This report is updated by 1:00 p.m. Sunday thru Friday and is valid for areas within and bordering Maricopa County in Arizona

| FORECAST DATE                              | YESTERDAY<br>SAT 03/20/2010                         | TODAY<br>SUN 03/21/2010 | TOMORROW<br>MON 03/22/2010 | EXTENDED<br>TUE 03/23/2010 |
|--------------------------------------------|-----------------------------------------------------|-------------------------|----------------------------|----------------------------|
| <b>NOTICES</b><br>(*SEE BELOW FOR DETAILS) | NONE                                                | NONE                    | NONE                       | NONE                       |
| AIR POLLUTANT                              | Highest AQI Reading/Site<br>(Preliminary data only) |                         |                            |                            |
| <b>O3*</b>                                 | <b>48</b><br>WEST PHOENIX                           | <b>51</b><br>MODERATE   | <b>45</b><br>GOOD          | <b>43</b><br>GOOD          |
| <b>CO*</b>                                 | <b>10</b><br>SOUTH PHOENIX                          | <b>08</b><br>GOOD       | <b>12</b><br>GOOD          | <b>10</b><br>GOOD          |
| <b>PM-10*</b>                              | <b>43</b><br>SOUTH PHOENIX                          | <b>37</b><br>GOOD       | <b>53</b><br>MODERATE      | <b>41</b><br>GOOD          |
| <b>PM-2.5*</b>                             | <b>22</b><br>DURANGO &<br>PHOENIX SUPERSITE         | <b>29</b><br>GOOD       | <b>34</b><br>GOOD          | <b>26</b><br>GOOD          |

\* O3 = Ozone    CO = Carbon Monoxide    PM-10 = Particles 10 microns & smaller    PM-2.5 = Particles smaller than 2.5 microns  
 \*\*“Ozone Health Watch” means that the highest concentration of OZONE may approach the federal health standard.  
 \*\*“PM-10 or PM-2.5 Health Watch” means that the highest concentration of PM-10 or PM-2.5 may approach the federal health standard.  
 \*\*“High Pollution Advisory” means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.  
 \*\*“DUST” means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

**Health message for Sunday March 21: Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.**

**Health message for Monday March 22: Unusually sensitive people should consider reducing prolonged or heavy exertion.**

**Synopsis and Discussion**

The strong ridge over AZ today will weaken on Monday followed by the passage of a relatively weak trough in the mid-latitude storm track on Tuesday and early Wednesday. Since a few showers are possible on Tuesday and winds are not expected to be strong enough to generate much if any blowing dust, local PM-10 levels are forecast to remain relatively low. Plentiful cloud cover is advertised for the Valley Monday and Tuesday so ozone formation should remain suppressed as well. -Reith

MONITORING SITE MAPS: STATIC MAP – <http://www.azdeq.gov/environ/air/monitoring/images/map.jpg>  
 INTERACTIVE MAPS – <http://aqwww.maricopa.gov/AirMonitoring/SitePollutionMap.aspx>  
<http://www.airnow.gov/>



**POLLUTION MONITOR READINGS FOR SATURDAY, MARCH 20, 2010**



**O3 (OZONE)**

| SITE NAME         | MAX 8-HR VALUE (PPB) | MAX AQI | AQI COLOR CODE |
|-------------------|----------------------|---------|----------------|
| Apache Junction   | 49                   | 42      |                |
| Blue Point        | 49                   | 42      |                |
| Central Phoenix   | 52                   | 44      |                |
| Fountain Hills    | 49                   | 42      |                |
| North Phoenix     | 54                   | 46      |                |
| Phoenix Supersite | 55                   | 47      |                |
| Pinnacle Peak     | 47                   | 40      |                |
| South Phoenix     | 49                   | 42      |                |
| South Scottsdale  | 50                   | 42      |                |
| West Phoenix      | 57                   | 48      |                |

**CO (CARBON MONOXIDE)**

| SITE NAME          | MAX 8-HR VALUE (PPM) | MAX AQI | AQI COLOR CODE |
|--------------------|----------------------|---------|----------------|
| Buckeye            | 0.2                  | 03      |                |
| Central Phoenix    | 0.5                  | 06      |                |
| Dysart             | 0.2                  | 03      |                |
| Glendale           | 0.4                  | 05      |                |
| Greenwood          | 0.7                  | 08      |                |
| Mesa               | 0.2                  | 03      |                |
| North Phoenix      | 0.4                  | 05      |                |
| Phoenix Supersite  | 0.4                  | 05      |                |
| South Phoenix      | 0.9                  | 10      |                |
| South Scottsdale   | 0.5                  | 06      |                |
| Tempe              | 0.3                  | 04      |                |
| West Chandler      | 0.6                  | 07      |                |
| West Indian School | 0.7                  | 08      |                |
| West Phoenix       | 0.6                  | 07      |                |

## PM-10 (PARTICLES)

| SITE NAME                  | MAX 24-HR VALUE (ug/m3) | MAX AQI  | AQI COLOR CODE |
|----------------------------|-------------------------|----------|----------------|
| Buckeye                    | 20                      | 19       |                |
| Central Phoenix            | 20                      | 19       |                |
| Combs School(Pinal County) | NOT AVBL                | NOT AVBL | NOT AVBL       |
| Durango                    | 24                      | 22       |                |
| Dysart                     | 16                      | 15       |                |
| Glendale                   | 16                      | 15       |                |
| Greenwood                  | 25                      | 23       |                |
| Higley                     | 20                      | 19       |                |
| Maricopa                   | NOT AVBL                | NOT AVBL | NOT AVBL       |
| Phoenix Supersite          | 18                      | 17       |                |
| South Phoenix              | 46                      | 43       |                |
| West Chandler              | 17                      | 16       |                |
| West Forty Third           | 34                      | 31       |                |
| West Phoenix               | 29                      | 25       |                |
| Zuni Hills                 | 16                      | 15       |                |

## PM-2.5 (PARTICLES)

(Some data derived from light-scattering equipment)

For maps go to: <http://www.airnow.gov/>

| SITE NAME              | MAX 24-HR VALUE (ug/m3) | MAX AQI  | AQI COLOR CODE |
|------------------------|-------------------------|----------|----------------|
| Durango                | 6.8                     | 22       |                |
| Dysart                 | NOT AVBL                | NOT AVBL | NOT AVBL       |
| Estrella Mountain Park | 3.6                     | 12       |                |
| Phoenix Supersite      | 6.8                     | 22       |                |
| Queen Valley           | 3.2                     | 10       |                |
| Vehicle Emissions Lab  | NOT AVBL                | NOT AVBL | NOT AVBL       |
| West Phoenix           | NOT AVBL                | NOT AVBL | NOT AVBL       |

## LOCAL AIR POLLUTANTS IN DETAIL



### 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<sub>x</sub> (Nitrogen Oxides) in the presence of heat and sunlight.

**Sources** – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NO<sub>x</sub> 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.

### **CO (CARBON MONOXIDE):**

Description – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely.

Sources – In cities, as much as 95 percent of all CO emissions emanate from automobile exhaust. Other sources include industrial processes, non-transportation fuel combustion, and natural sources such as wildfires. Peak concentrations occur in colder winter months.

Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.

Unit of measurement – Parts per million (ppm).

Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)

Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

### **PM-10 & 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/m<sup>3</sup>)

Averaging interval – 24 hours (midnight to midnight).

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

{ Updated 09/24/2007 }