

GOOD



MODERATE



**UNHEALTHY
For Sensitive Groups**



UNHEALTHY



Children's Environmental Health

Air Quality Flag Program

Why?

- **Create public awareness of air quality conditions**
- **Protect kids' health**
- **Protect other sensitive populations from adverse effects of poor air quality (babies, teens, outdoor athletes, elderly, people with heart or airway disease)**
- **Engage community to take Action and to improve air quality and public health**

Background

- **2006 – ADEQ received an EPA grant to conduct a PM-10 study in Maricopa County**
- **2007 – The Maricopa County Asthma Coalition pushed for a Flag Program**
- **2007 – ADEQ negotiated a \$25k SEP-settlement that paid for flags, administration and implementation in 8 elementary school districts in Maricopa County**

Background

- **2007 – As part of the CEH Study & exchange grant, flags were purchased by ADEQ to distribute to PM 10 and Ozone non-attainment areas**
- **2007 – ADEQ flags were distributed and Flag Programs were developed in Pinal and Yuma Counties as part of their SIPs to educate the public on air quality conditions**
- **2012 – ADEQ announced new Air Quality Monitoring and AQI forecast, and distributed air quality flags to Mariposa Community Health Center for the Nogales and Rio Rico Schools in Santa Cruz County**

Arizona Flag Program Regions:

- **Maricopa County Flag Program**
- **Pinal County Flag Program**
- **Yuma Flag Program**
- **Santa Cruz County Flag Program**

What is the School Flag Program?

- Schools raise a flag each day
- Flag colors are based on the colors of the AQI (Air Quality Index)
- The flag color indicates the local air quality forecast
- Program provides guidance on how to modify outdoor activities when the air quality is unhealthy

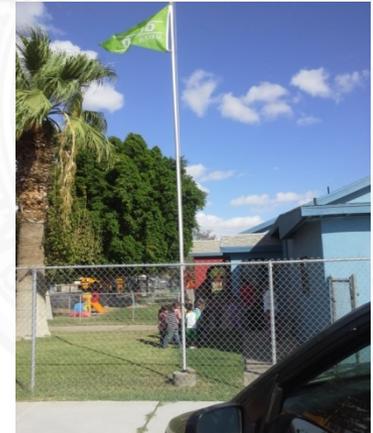


Photo #1 provided courtesy Chicano's Por La Casa -Yuma, AZ

Photo #2 provided by courtesy Monterey Park Elementary School- Phx, AZ.

- ADEQ issues forecasts for the next day (Sunday – Friday)
- Forecast is sent to participants/stakeholders who join ADEQ's Flag Program
Interested parties subscribe via email and can register at:
<https://public.govdelivery.com/accounts/AZDEQ/subscriber/new>
- School participant/recipient raises flag that correlates to the predicted air pollution level
- Public is aware of air conditions and plan outdoor activities/events accordingly



How to read the AQI Forecast



AIR QUALITY FORECAST FOR Wednesday, March 19, 2014

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

QUESTION: What color flag will you fly tomorrow ? (see column dated 3/19/2014)

ANSWER: Yellow Moderate Flag because Ozone was forecast as moderate- certain individuals may be impacted by air quality at this level. Always fly the most health protective color!!!

FORECAST DATE	YESTERDAY Mon 03/17/2014	TODAY Tue 03/18/2014	TOMORROW Wed 03/19/2014	EXTENDED Thu 03/20/2014
NOTICES (*SEE BELOW FOR DETAILS)				
AIR POLLUTANT	Highest AQI Reading/Site (*Preliminary data only*)			
O3*	51 Apache Junction	51 Moderate	52 Moderate	51 Moderate
CO*	7 Glendale and South Scottsdale	9 Good	9 Good	10 Good
PM-10*	51 West Forty Third	31 Good	36 Good	39 Good
PM-2.5*	34 Durango and South Phoenix	30 Good	31 Good	32 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 OZONE, 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.

How to read the AQI Forecast

AIR QUALITY FORECAST FOR TUESDAY, APRIL 09, 2013

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 SUN 04/07/2013	TODAY MON 04/08/2013	TOMORROW TUE 04/09/2013	EXTENDED WED 04/10/2013
NOTICES (*SEE BELOW FOR DETAILS)	NONE	PM-10 HIGH POLLUTION ADVISORY NWS WIND ADVISORY NWS BLOWING DUST ADVISORY	PM-10 HEALTH WATCH	NONE
AIR POLLUTANT	Highest AQI Reading/Site (Preliminary data only)			
O3*	64 BLUE POINT & TONTO NAT'L MON	58 MODERATE	45 GOOD	48 GOOD
CO*	09 PHOENIX SUPERSITE	06 GOOD	07 GOOD	07 GOOD
PM-10*	38 CENTRAL PHOENIX	142 UNHEALTHY FOR SENSITIVE GROUPS	90 MODERATE	53 MODERATE
PM-2.5*	34 DURANGO	74 MODERATE	52 MODERATE	37 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.

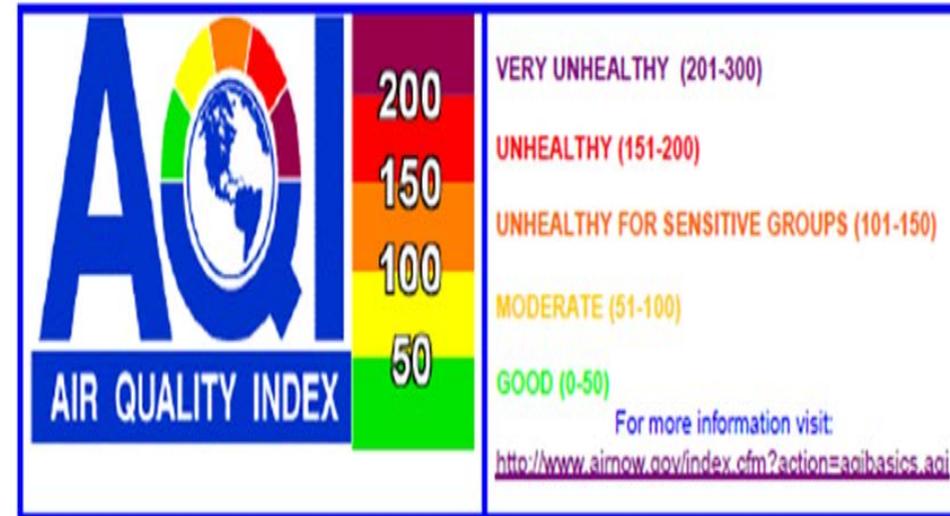
"DUST" means that short periods of high PM-10 concentrations caused by outflow from thunderstorms are possible.

QUESTION: What flag do I fly today? (see column dated 4/08/2014)

ANSWER: Fly the Orange Unhealthy flag for Pollutant PM-10 because this is the most protective and PM 10 is the pollutant of concern today !

Air Quality Index

- Tells you how clean (or polluted) your air is on a particular day, and the health effects/risks associated with each level.
- The darker the color, the worse the air quality.
- For more detailed information visit:
www.epa.gov/airnow



AIR QUALITY FORECAST FOR Wednesday, March 19, 2014

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



A Health Watch (HW) is issued when any pollutant reaches the upper **Moderate** range, between 90 and 100 AQI.

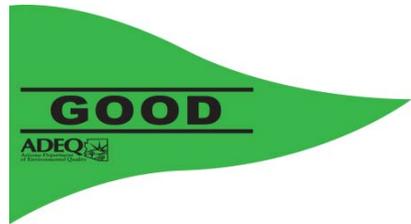


A High Pollution Advisory (HPA) issued when any pollutant reaches the **Unhealthy for Sensitive Groups** range, greater than 100 AQI.



Maricopa County will issue **NO BURN DAY** restrictions when a Health Watch or HPA is issued for either PM10 or PM2.5

4 Easy Steps



1. Request flags from ADEQ



2. Subscribe & Check the daily air quality forecast and fly the corresponding flag



3. Educate and inform the school and community



4. Follow the air quality and outdoor activity guidance

Free materials are available at:

<http://www.azdeq.gov/ceh/flag.html>

The toolkit resources include:

- Flag Coordinator Handbook
- AQI Outdoor Activity Guide
- Fact Sheets
- Educational Handouts
- Parent Letter
- Press Template

UNHEALTHY For Sensitive Groups



- Educate and inform teachers and parents
- Recruit 1–2 teachers to be the Flag Program Coordinator(s) & encourage student involvement
- Inform the school and surrounding community through:

- Newsletters
- Emails
- Flyers
- Local newspaper
- Radio station
- Word-of-mouth

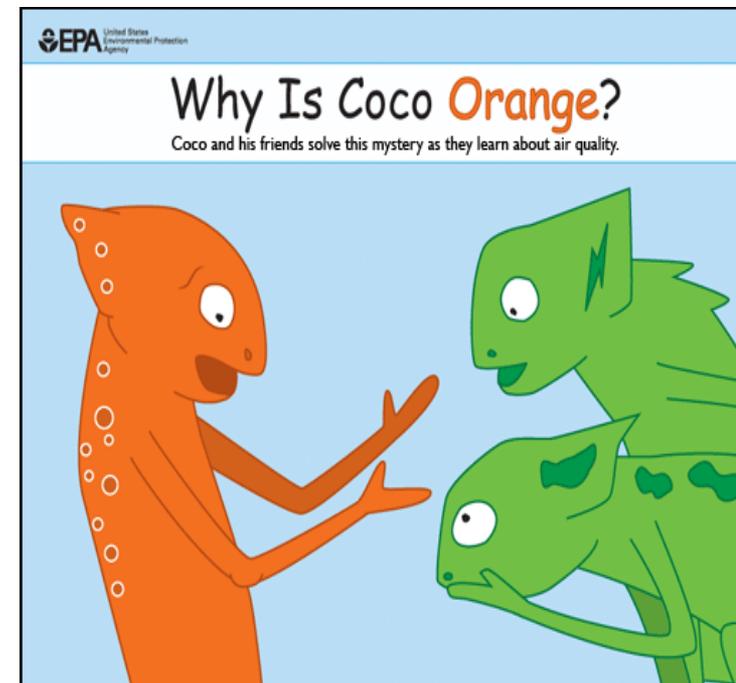


- **Dose = Concentration x Breathing rate x Time (CBT)**
 - Concentration – amount of pollutant in air
 - Breathing Rate – how fast you breathe
 - Time – time spent outdoors
- **Pay attention to symptoms**
- Reduce any or all of these factors to reduce dose



- Resources for teachers are available on the AirNow.gov website:
www.airnow.gov

- Online curricula
- Interactive games
- Air quality simulator
- AirNow Learning Center
- Children's picture book



ADEQ FLAG Program Contact

Office of Children's Environmental Health

State Air Quality Flag Program Coordinator

Julie Finke

602-771-2231

jac@azdeq.gov

<http://www.azdeq.gov/ceh/flag.html>