

## AQI Work/Rest Cycles

### Workloads:

Easy: Walking on hard surface @ 2.5 mph with < 30 lb load. Guard duty, drill and Ceremony.

Moderate: Walking on hard surface @ 3.5 mph with < 40 lb load. Walking on loose sand @ 2.5 mph with no load. Light maintenance work. Construction equipment operation.

Hard: Walking on hard surface @ 3.5 mph with > 40 lb load. Walking on loose sand @ 2.5 mph with load. Loading and unloading pallets. Dragging hoses or lines.

### Work/Rest Cycles Based on AQI Category\*

(Minutes work/minutes rest)

AQI Category	Easy Work	Moderate Work	Hard Work
Good	No Limit		
Moderate	No Limit		
Unhealthy f/Sensitive Groups	No Limit		50/10
Unhealthy	No Limit	50/10	40/20
Very Unhealthy	40/20	30/30	20/40
Hazardous	30/30	20/40	10/50

\*Work/rest cycles assume that no respiratory protection is being worn. N-95's will reduce AQI category by 95%

## AQI Categories

### 0-50 AQI (Good)

No Cautionary/Health Effect Statements

### 51-100 (Moderate)

Unusually sensitive people should consider reducing prolonged or heavy exertion.

### 101-150 (Unhealthy for Sensitive Groups)

People with respiratory or heart disease, the elderly and children should limit prolonged exertion.

### 151-200 (Unhealthy)

People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.

### 201-300 (Very Unhealthy)

People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.

### 301-500 (Hazardous)

Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly and children should remain indoors.

### What Is AQI?

AQI Stands for Air Quality Index, and it is the measurement of small particles (2.5 micrometers across, known as particulate matter (PM) 2.5) that can enter your lungs, bypassing your body's natural defenses and cause short and long term health effects.

### How is AQI Measured?

Bioenvironmental Engineering uses Purple Air sensors and other equipment to measure the concentration of PM 2.5 in the air. This is then converted to AQI using tools from the Environmental Protection Agency. Purple Air sensors automatically calculate the AQI and publishes this information on their website.

### How Can I Check the Local AQI?

Beale AFB has three Purple Air sensors across base. These sensors update the AQI in near real-time. The Purple Air maps can be accessed at the link below:

<https://www.purpleair.com/map>

Bioenvironmental Engineering will also be sending updates during the duty day during elevated AQI levels (Unhealthy or higher) along with health advisories and recommended work/rest cycles though Command Post. Updates will be sent only when there is a change in AQI category. After hours, please reference the Purple Air website.

## Air Quality Health Facts

- Airborne particles within smoke/haze can present serious health hazards primarily affecting at risk populations: people with heart or lung disease, elderly, and children.

- Coronary artery disease, congestive heart failure, and asthma/COPD present greatest risk since airborne particles aggravate these diseases.

- Elderly are at increased risk because they may have undiagnosed heart/lung diseases or diabetes.

- Children are at increased risk due to developing lungs, more time at high activity levels, and increased likelihood to have asthma or acute respiratory disease.

- Healthy children and adults have not been reported to suffer serious effects from short-term exposures, however they may experience minor irritation such as eye irritation, headaches and cough.

- Short-term exposures to particles (hours or days) can aggravate lung disease; may cause asthma attacks, acute bronchitis, and increase susceptibility to respiratory infections.

- Long-term exposures to particles have been associated with reduced lung function, bronchitis, and premature death.

### Protecting Yourself During Elevated AQI Levels:

The best health protection measure is to remain indoors during elevated AQI.

If you must go outside, BE recommends wearing an N-95 or KN-95 mask as these will filter out up to 95% of airborne particulates if worn properly. Ex: If the AQI is currently at 500 (Hazardous), the N-95 or KN-95 will reduce exposure by 95%, bringing the AQI category to 25 (Good); this would reduce the recommended Work/Rest Cycle and potential exposure.

### More about the N-95 & Wear

The N95 mask is a disposable personal protective device that closely fits the wearer's face to prevent the inhalation of up to 95% of small airborne particles and large droplets of aerosolized fluid. N95s are preferred over surgical masks as they provide a tighter seal to the wearer's face.

Choose a size that will fit over your nose and under your chin. It should seal tightly to your face. Masks come in regular and small sizes.

Beale AFB, CA

# Air Quality Index (AQI) Fast Facts



Websites:

<https://www.purpleair.com/map>

<https://www.beale.af.mil/Home/Fire-Information-and-Resources/>

For Any Questions or Concerns please contact Bioenvironmental Engineering at 634-2045