

For more information, contact: *Melissa Haas*, 308-487-3600 ext. 108 or mhaas@pphd.ne.gov

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## Air Quality and Your Health, Breathe Easier

The air we breathe is essential to living a healthy life. Understanding what affects your air quality and how to understand your risk can ensure that you are taking all the necessary steps to keep your home and family healthy. Wildfire smoke is the one of the top offenders for poor air quality days and with increased conditions for the likelihood of a wildfire such as drought and high wind, it is important to know the steps you can take to protect your health during poor air quality days.

## Wildfire Smoke

Wildfire smoke is a mixture of gaseous pollutants, hazardous air pollutants, water vapor, and particle pollution. Particle pollution is the cause of health hazards. Particle pollution is a mixture of solid and liquid droplets which are suspended in the air.

Dry conditions increase the potential for wildfires in or near wilderness areas. Wildfires that burn near populated areas can have significant impact on property, livestock, and human health.

## **Health Effects of Wildfire Smoke**

Health effects from wildfire smoke can be minor to relatively serious. Particle pollution affects the body's ability to remove inhaled foreign material and can worsen pre-existing conditions. Certain groups of people are at higher risk of health effects from wildfire smoke such as people with asthma or heart disease and:

- Children under 18
- Pregnant women
- Older adults
- People of lower socio-economic status
- Outdoor workers

Wildfire smoke during short-term exposure can cause breathing difficulties such as coughing or wheezing. Effects of a few days of exposure can cause bronchitis and reduced lung function as well as potential heart effects such as heart failure or heart attack. Exposure to smoke over longer periods of time can cause a drastic reduction in lung function and those with pre-existing conditions can have worsening health effects.

## **Air Quality Index**

It can be difficult to predict the air quality during a wildfire due to wind, weather, and terrain. To monitor your risk during a wildfire event, using the Air Quality Index (AQI) is the best way to stay informed about what activities or precautions need to be taken. The AQI is a nationally uniform color-coded index that measures ozone and particle pollution. The higher the AQI number, the greater level of pollution and the greater the health concern. There are six categories on the AQI;

- Green (0-50): Good air quality, little or no air pollution risk.
- Yellow (51-100): Moderate, acceptable air quality but some risk for those unusually sensitive to air pollution.
- Orange (101-150): Unhealthy for sensitive groups, the general public is usually less affected.
- Red (151-200): Unhealth, some members of the general public may now experience health effects while sensitive groups can experience more serious health effects.
- Purple (201-300): Very unhealthy, there is an increased health risk for everyone
- Maroon (301 and higher): Hazardous, this is considered a health emergency condition and everyone is more likely to be affected.

Reducing exposure during poor air quality events is key to minimizing the impacts of particle pollution. Some steps can include consistently checking the air quality, checking to ensure your HVAC (heating, ventilation, and air condition) unit is filtering properly, using respirators, or buying portable air cleaners. Air quality can be monitored through the AirNow site from the EPA or by checking on air monitors installed throughout the Panhandle here: https://map.purpleair.com

PPHD has air monitors that can be given to area businesses or work sites that are interested in housing one of these monitors. Some locations that need an air monitor include Rushville, Hay Springs, Lyman, Bridgeport, Dix, Big Springs, Harrison, Alliance, Bayard, Potter, and Hyannis. To participate please reach out to Megan Barhafer at <a href="mailto:mbarhafer@pphd.ne.gov">mbarhafer@pphd.ne.gov</a>.

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