

¹Wildfire smoke and your health

One of the natural sources of air pollution in California and Oregon is from wildfire. Wildfires are unpredictable and may result in severe short-term smoke impacts. The smoke generated by wildfire can pose a major health risk. This smoke is primarily made up of small particles, gases and water vapor, with trace amounts of hazardous air pollutants. The most harmful are the small particles, or *particulate matter smaller than 2.5 micrometers in diameter (100 micrometers is the diameter of a human hair)*. These particles can be inhaled deeply into the lungs, damaging lung tissue and causing respiratory and cardiovascular problems. Symptoms from short-term smoke exposure can range from scratchy throat, cough, irritated sinuses, headaches, runny nose and stinging eyes, to more serious reactions from persons with asthma, emphysema, congestive heart disease and other existing medical conditions. The elderly and children are considered high-risk groups. Monitoring wildfire smoke levels are often difficult because wildfires occur in remote areas, and the smoke impacts are short-lived. Given the highly visible nature of wildfire smoke, it is possible to make visual estimates of smoke levels. Generally, the worse the visibility, the worse the smoke, the worse the health impact. The table on the next page shows this relationship and how to estimate potential health effects.

The procedure for making this observation is:

1. Face away from the sun
2. Determine the limit of your visual range by looking for targets at known distances (miles).
3. Visual range is that point at which even high contrast objects totally disappear.
4. Use the values above to determine the local forest fire smoke category.

Visibility Range	Health Category	Health Effects	Cautionary Statements
10 miles and up	Good	None	None
6 to 9 miles	Moderate	Possibility of aggravation of heart or lung disease among persons with cardiopulmonary disease and the elderly.	None
3 to 5 miles	Unhealthy for Sensitive Groups	Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.	People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
1½ to 2½ miles	Unhealthy	Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in general population.	People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
1 mile	Very Unhealthy	Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant increase in respiratory effects in general population.	People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
Under ¾ mile	Hazardous	Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; serious risk of respiratory effects in general population.	Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly and children should remain indoors.

Source: Guideline For Reporting of Daily Air Quality – Air Quality Index (AQI), EPA-454/R-99-010, July 1999, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards.

1-Source from: Oregon Department of Environmental Quality, Last Updated: 08/28/2001

**GUIDELINES FOR DETERMINING
POSSIBLE HEALTH IMPACTS FROM
SMOKE PRODUCED BY WILDFIRES**



SISKIYOU COUNTY APCD
525 SOUTH FOOTHILL DRIVE
YREKA, CALIFORNIA 96097
TELEPHONE (530) 841-4029

BURN DAY INFORMATION NUMBERS
(530) 842-8123
OR TOLL FREE
1(866) 652-2876

