



Tuolumne County Public Health Department

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Health Advisory for residents and travelers to areas affected by wildfire smoke

Wildfires continue to variably impact air quality in Tuolumne County, so the Tuolumne County Department of Public Health advises residents and visitors not to take children to areas of the county with unhealthy smoky conditions, as well as to take precautions in school and sports settings.

BACKGROUND-CURRENT CONDITIONS:

California is experiencing unprecedented wildfires this summer, affecting large parts of the state, including the ongoing Ferguson Fire and the Donnell Fire, which is now burning in Tuolumne County east along the Highway 108 corridor above Donnell Reservoir. In addition to these local fires, we are now seeing smoke impacts in Tuolumne County from the Carr Fire near Redding and the Mendocino Complex Fire in Lake and Mendocino Counties. For the next three days, smoke conditions are expected to be impacted by a high pressure system and long daytime inversions with only short periods of clearing late in the afternoon, followed by smoke moving back into the foothill communities overnight.

As we close in on late summer, many families are still traveling to areas affected by the fires and youth are beginning their sports activities and school preparations. Unfortunately, wildfire smoke can travel hundreds of miles and affect large geographic areas, including your area of residence, work, or travel destinations.

Wildfire smoke contains very small particulate matter – called PM2.5 – that are breathed deep into the lungs. The PM2.5 component of air pollution (e.g., from smoke) is linked to a number of health problems, including coughing, wheezing, reduced lung function, asthma attacks, heart attacks and strokes. It can have long-term health impacts. Additionally, wildfire smoke may contain unknown chemicals and particles from manmade materials that have burned (homes, cars, etc.).

Some groups of people are more sensitive to the adverse health effects of wildfire smoke. They include:

- People with cardiovascular disease (diseases of the heart and blood vessels)
- People with lung disease, including asthma and Chronic Obstructive Lung Disease
- Children and teenagers
- Older adults
- Persons with obesity or diabetes may have increased risks
- New or expectant mothers may want to take precautions to protect the health of their babies

Children are especially at risk for adverse health effects from exposure to wildfire smoke and ash, mostly because their lungs are still growing. Children who breathe in wildfire smoke and ash can have chest pain and feel a tightness in their chest; trouble breathing; wheezing; coughing; nose, throat, and eye burning; dizziness; or other symptoms. Children with asthma, allergies, or chronic health issues may have more trouble breathing when smoke or ash is present.

Note that some areas are also affected by extreme heat and people who are not acclimated to the higher temperature, or are dehydrated, may experience additional stresses on their heart and lungs.

HOW CAN RESIDENTS & VISITORS ASSESS AIR QUALITY & HEALTH RISK?

Because the Tuolumne County geography may entrap smoke in certain valleys and basins, the following visibility chart can be used to determine the air quality where you are.

First identify on a map certain landmarks on the horizon. Then check to see at what distance the landmarks can no longer be seen. The distance of this landmark is the “visibility in miles.” **Visibility in miles provides an excellent measure of air quality, and a way to evaluate the risk to your health.**

Air Quality Index Levels of Health Concern	Visibility in Miles	Meaning
Good	10 miles and up	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	6-9 miles	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	3-5 miles	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	1.5-2.5 miles	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	1-1.25 miles	Health alert: everyone may experience more serious health effects.
Hazardous	0.75 mile or less	Health warnings of emergency conditions. The entire population is more likely to be affected.

WHAT SHOULD RESIDENTS AND VISITORS DO?

The Tuolumne County Department of Public Health recommends:

- See page five of this release for Recommendations for Schools, Sports, and Others Responsible for Children During a Wildfire Smoke Event;
- For residents of Tuolumne County, see the Wildfire Health Tips on the next page;
- For residents and visitors, avoid traveling to areas with poor air quality due to wildfire smoke, especially if traveling with people in the sensitive groups above (to determine or monitor air quality see: https://www.airnow.gov/index.cfm?action=topics.smoke_wildfires and use the plus and minus icon to zoom to the location where you are or where you want to go with the cursor).
- If travel to an area with poor air quality is unavoidable or essential, then monitor air quality frequently and follow CDC guidelines (<https://www.cdc.gov/disasters/wildfires/index.html>) and EPA/PEHSU guidelines for children and other sensitive groups to reduce smoke exposure and reduce health consequences (https://www.pehsu.net/Library/facts/PEHSU_Protecting_Children_from_Wildfire_Smoke_and_Ash_FA_CT_SHEET.pdf);

TUOLUMNE COUNTY HEALTH DEPARTMENT

Wildfire Smoke Health Tips

As fire agencies battle wildfires, there are measures we all can take to protect our health from harmful pollutants in our air. Smoke is a respiratory irritant that can worsen conditions such as asthma, other chronic lung conditions, or heart disease. Pregnant women, children, elderly people, smokers, and people who work or exercise outdoors are at higher risk for complications from smoke exposure.

Here are some tips you can follow to protect you and your family members from unhealthy air:

Stay indoors. Remain indoors, with air conditioning on, as much as possible when air pollution levels are unhealthy. Check the local Air Quality Index (AQI) for this information. Keep the air conditioner filter clean to prevent bringing additional smoke inside. In extremely hot weather, staying inside with the windows closed, without air conditioning may be dangerous. A swamp cooler will not provide protection and will pull in the smoky air from outside. Consider seeking alternative shelters in this situation.

Reduce outdoor activity. If it looks smoky outside, it is not a good time for outdoors exercise and activity for people of any age. People with heart or lung disease should take further measures to avoid prolonged exertion and outdoor exposure. Reducing your physical activity outdoors lowers the amount of unhealthy air your body takes in.

Consult your physician. If you or a family member have heart or lung disease, if you are an older adult, or if you have children, talk with your doctor about whether and when you should leave the area. When smoke is heavy for a prolonged period of time, fine particles can build up indoors, even though you may not be able to see them. If you have asthma or other lung disease, call your doctor if your symptoms worsen.

Have a plan. Be sure to have a family emergency plan and kit with an adequate supply of food, water, medications, and necessities for at least 72 hours in the event that you need to stay home or evacuate.

Keep informed. Visit the local Air Quality Index website (see below) for updates on the air quality and air smoke monitoring. Register for the Citizen Alert emergency notification system for Tuolumne County (link below).

Use of Respirators - not "Masks". Masks, such as dust, surgical masks or wet bandanas, will not protect your lungs. If the smoke is that irritating to you, the best option is to remain indoors or temporarily relocate. An option is a NIOSH approved disposable respirator, such as an N95. These can be beneficial to reduce particulate inhalation. People with heart or lung conditions should consult their doctor before using a respirator.

Take a break. If you can, take a break by traveling to a smoke-free area away from the wildfire, even if it is just for 3-4 hours. This can be helpful for both your physical health and a relief from other stressors.

More Resources:

Tuolumne County Air Quality Index Website:
<https://www.tuolumnecounty.ca.gov/366/Current-Air-Quality>

AirNow Website "How Smoke from Fires Can Affect Your Health"
<https://www.airnow.gov/index.cfm?action=smoke.index>

Tuolumne County Citizen Alert System Registration:
<https://www.tuolumnecounty.ca.gov/CivicAlerts.aspx?AID=442>

**For more information contact:
Tuolumne County Public Health
20111 Cedar Road North, Sonora, CA 95370**

209-533-7401 www.tuolumnecounty.ca.gov/

Recommendations for Schools and Others Responsible for Children during a Wildfire Smoke Event

Health Recommendations for Schools, Coaches, and Event Coordinators regarding student exposure to fine particles (smoke and dust) air pollution

Air Quality Conditions					
→Check current air quality first at www.airnow.gov/index.cfm?action=topics.smoke_wildfires then use this chart.					
Activity	GOOD	MODERATE	UNHEALTHY FOR SENSITIVE GROUPS (USG)	UNHEALTHY	VERY UNHEALTHY / HAZARDOUS
	(AQI : 0-50)	(AQI: 51-100)	(AQI: 101-150)	(AQI: 151-200)	(AQI: 201-300)
	Visibility* 11+	Visibility 6-10 miles	Visibility 3-5 miles	Visibility 1.5 - 2.75	Visibility < 1.25
Recess (15 min)	No restrictions	No restrictions, but allow students with asthma or other respiratory problems to stay indoors	Keep children with asthma, respiratory infection, and heart or lung disease indoors. Make indoor space available for all children	Keep children indoors and activity levels light.	Keep all children indoors and activity levels light.
P.E. (1 hour)	No restrictions	Monitor children with asthma or other respiratory problems, limit their vigorous activities and increase rest periods	Limit to light outdoor activities. Allow any student to stay indoors if going outside might affect their health. Keep children with asthma, respiratory infection, and heart or lung disease indoors. Limit these children to moderate activities.	Conduct P.E. indoors. Limit children to light activities.	Keep all children indoors and activity levels light.
Scheduled Sporting Events & Practices	No restrictions	Monitor children with asthma or other respiratory problems, limit their vigorous activities and increase rest periods	Consider moving the event indoors. Increase rest periods and substitutions to allow for lower breathing rates. Children with asthma, respiratory infection, and heart or lung disease should play indoors.	Consider canceling, rescheduling, or relocating event to an area of good air quality, if this can be done without much transit through areas with poor air quality	Consider canceling, rescheduling, or relocating event to an area of good air quality, if this can be done without much transit through areas with poor air quality

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*Asthma action plans should be followed at all times. When air quality is diminished, individuals should pay special attention to their Asthma Action Plan

→**Light activities:** walking slowly carrying school books, hanging out with friends, playing board games

→**Moderate activities:** Skateboarding, slow pitch softball, shooting basketballs

→**Vigorous activities:** Running, jogging, football, soccer, basketball, jumping rope

How to roughly estimate air quality based on visibility without an air quality monitor or airport visibility estimate:

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

Tuolumne County Public Health Department
 (209) 533-7401
<https://www.tuolumnecounty.ca.gov/250/Public-Health>

Tuolumne County Air Pollution Control District
 (209) 533-5693
www.tuolumnecounty.ca.gov/364/Air-Pollution-Control-District



Special thanks to the North Coast Unified Air Quality Management District for providing this valuable tool