

Wildfire Preparedness and Response: Available Resources and Tools

Summer RTOC 2019

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Outline

- Outside Resources Available to Tribes
- EPA GAP
- Tools for Wildfire Smoke
- Q&A

Non-EPA Resources

- IHS
- FEMA
- Natural Resource Conservation Service (NRCS)

Federal Emergency Management Agency (FEMA)

- FEMA provides several funding opportunities for prevention and recovery from wildfire-related harm:
 - Hazard Mitigation Grant Program (<https://www.fema.gov/hazard-mitigation-grant-program>)
 - Must submit a disaster declaration request to FEMA within 30 days of the incident
 - Pre-Disaster Mitigation Grant Program (app last year Oct- Jan <https://www.fema.gov/pre-disaster-mitigation-grant-program>)
 - The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters.
 - Flood Mitigation Assistance Program (<https://www.fema.gov/flood-mitigation-assistance-grant-program>)
 - Could be used if erosion from wildfire could cause flooding

Natural Resources Conservation Services (NRCS-USDA)

- NRCS offers the following funding programs to support response to wildfires:
 - Environmental Quality Incentives Program (EQIP)
 - Provides financial and technical assistance to agricultural and forestry producers to address natural resource concerns and deliver environmental benefits
 - Improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation, and improved or created wildlife habitat

Natural Resources Conservation Services (NRCS-USDA) cont....

- Emergency Watershed Protection Program
 - The Emergency Watershed Protection (EWP) Program, a federal emergency recovery program, helps local communities recover after a natural disaster strikes.
 - The program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms and other natural disasters that impair a watershed

Indian Health Service (IHS)

Contact is Carolyn Garcia:
Carolyn.Garcia2@ihs.gov

- Cache of 20,000 N95 respirators for this year's wildfire season.
- Access to recovery resources such as:
 - Bottled water after water systems are damaged
 - Portable showers
- Webpage with resources for tribes in our program portal

CalOES

- Tribal Assistance Coordination Group (TAC-G Calls) during wildfire season
- Contact is Denese Shimenski:
Denise.Shemenski@CalOES.ca.gov
 - Contact her to be added to the list for call info

PROCLAMATIONS/DECLARATIONS

Incident Name/County	Local Emergency Proclamation	Governor's Emergency Proclamation	Federal Disaster Declared
Carr Fire, Shasta	7/26/2018	7/26/2018	3398-EM
Mendocino Complex, Mendocino	7/28/2018	7/28/2018	N/A
Ferguson Fire, Mariposa	7/15/2018	7/26/2018	N/A
Cranston Fire, Riverside	7/25/2018	7/26/2018	N/A

FIRE MANAGEMENT ASSISTANCE GRANTS

Incident Name/County	FMAG Number	Declaration Date
Carr Fire, Shasta	FM-5259-CA	7/23/2018
Mendocino Complex (River/Ranch Fire), Lake and Men	TBD	7/28/2018
Cranston Fire, Riverside	FM-5260-CA	7/25/2018

EVACUATIONS

Incident Name/County	Mandatory Evacuations	Advisory Evacuations	Population of Concern (AFN/Senior)
Carr Fire, Shasta	34,181	0	N/A
Mendocino Fire Complex, Mendocino	750	350	N/A
Ferguson Fire, Mariposa	1,444	0	N/A
Cranston Fire, Riverside	3,700	0	N/A

SHELTERS

County	Name	Location	Type	Status	Count/Capacity	Notes
Shasta	Shasta College	11555 Old Oregon Trail, Redding	ARC	Open	600 (+79)/600 (+79)	Redirecting evacuees to Cross Point shelter -
Shasta	Crosspoint Community College	2960 Hartnell Ave, Redding	ARC	Open	93 (+13)/253	-
Shasta	Simpson University	2211 College Dr, Redding	ARC	Open	72/135	-

GAP

- The following activities *are* **GAP-eligible** and can help tribes prepare for wildfire events in advance:
 - Vulnerability Assessments, Adaptation Plans, Emergency Response Plans, Coordination and consultation with other federal, state and local agencies, Develop MOAs with federal, state, and local agencies, develop outreach materials and strategies, related trainings, research opportunities.
- * Eligibility does not guarantee approval. Activities will be approved on a case by case basis, once they are deemed necessary, reasonable, allocable and aligned with the tribe's ETEP.

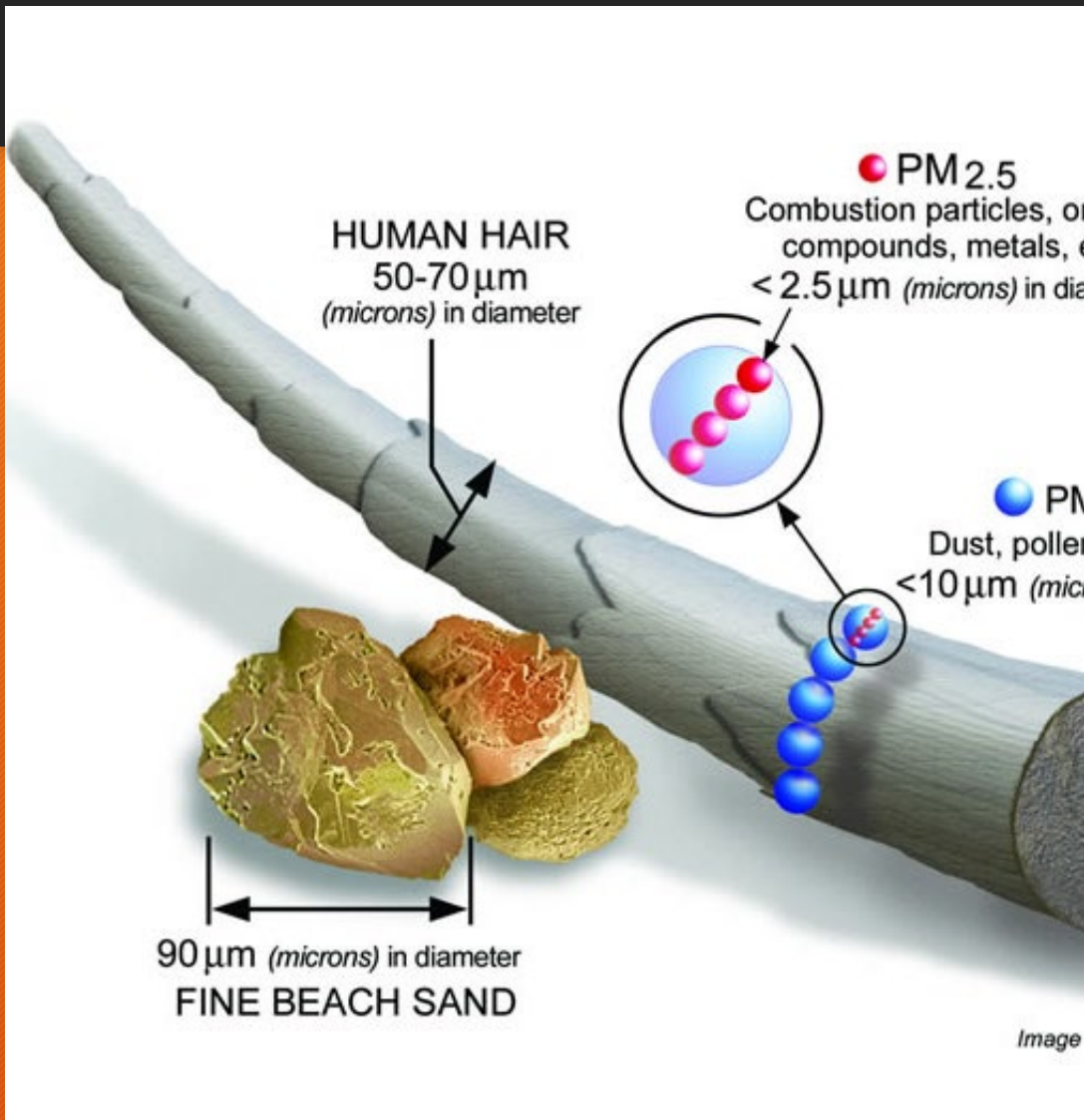
Implementation is not GAP Eligible

- As a reminder, *implementing* an all-hazards mitigation plan or responding to an emergency in ways that may be recoverable by the Tribe under a future disaster declaration are not GAP-eligible activities, since they are implementation (in the first case) and/or eligible to be reimbursed by another agency (in the second).

Smoke Outreach Tools



PM2.5 Health Effects



- Particle pollution, also called particulate matter or PM, is a complex mixture of extremely small particles and liquid droplets in the air.
- Exposure to PM is linked to a variety of significant health problems, including:
 - premature death in people with heart or lung disease
 - aggravated asthma
 - increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

The Air Quality Index (AQI)

- EPA's color-coded tool for communicating air quality and health information to the public
 - Issued 1999, as an update to the Pollutant Standards Index
 - Updated to reflect the latest standards and science
- The daily AQI for particle pollution is a 24-hour index (midnight to midnight); for ozone, it's the maximum eight-hour period in the day (calculated from 7 a.m. to midnight)
- Daily AQI reports for particle pollution and ozone show previous days' air quality
- AQI also is used for next-day forecasting and current air quality displays (the NowCast)

Air Quality Guide for Particle Pollution

Harmful particle pollution is one of our nation's most common air pollutants. Use the chart below to help reduce your exposure and protect your health. For your local air quality forecast, visit www.airnow.gov

Air Quality Index	Who Needs to be Concerned?	What Should I Do?
Good (0-50)		It's a great day to be active outside.
Moderate (51-100)	Some people who may be unusually sensitive to particle pollution.	Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier. Everyone else: It's a good day to be active outside.
Unhealthy for Sensitive Groups (101-150)	Sensitive groups include people with heart or lung disease, older adults, children and teenagers.	Sensitive groups: Reduce prolonged or heavy exertion. It's OK to be active outside, but take more breaks and do less intense activities. Watch for symptoms such as coughing or shortness of breath. People with asthma should follow their asthma action plans and keep quick relief medicine handy. If you have heart disease: Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
Unhealthy (151-200)	Everyone	Sensitive groups: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling. Everyone else: Reduce prolonged or heavy exertion. Take more breaks during outdoor activities.
Very Unhealthy (201-300)	Everyone	Sensitive groups: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Everyone else: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better.
Hazardous (301-500)	Everyone	Everyone: Avoid all physical activity outdoors. Sensitive groups: Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.

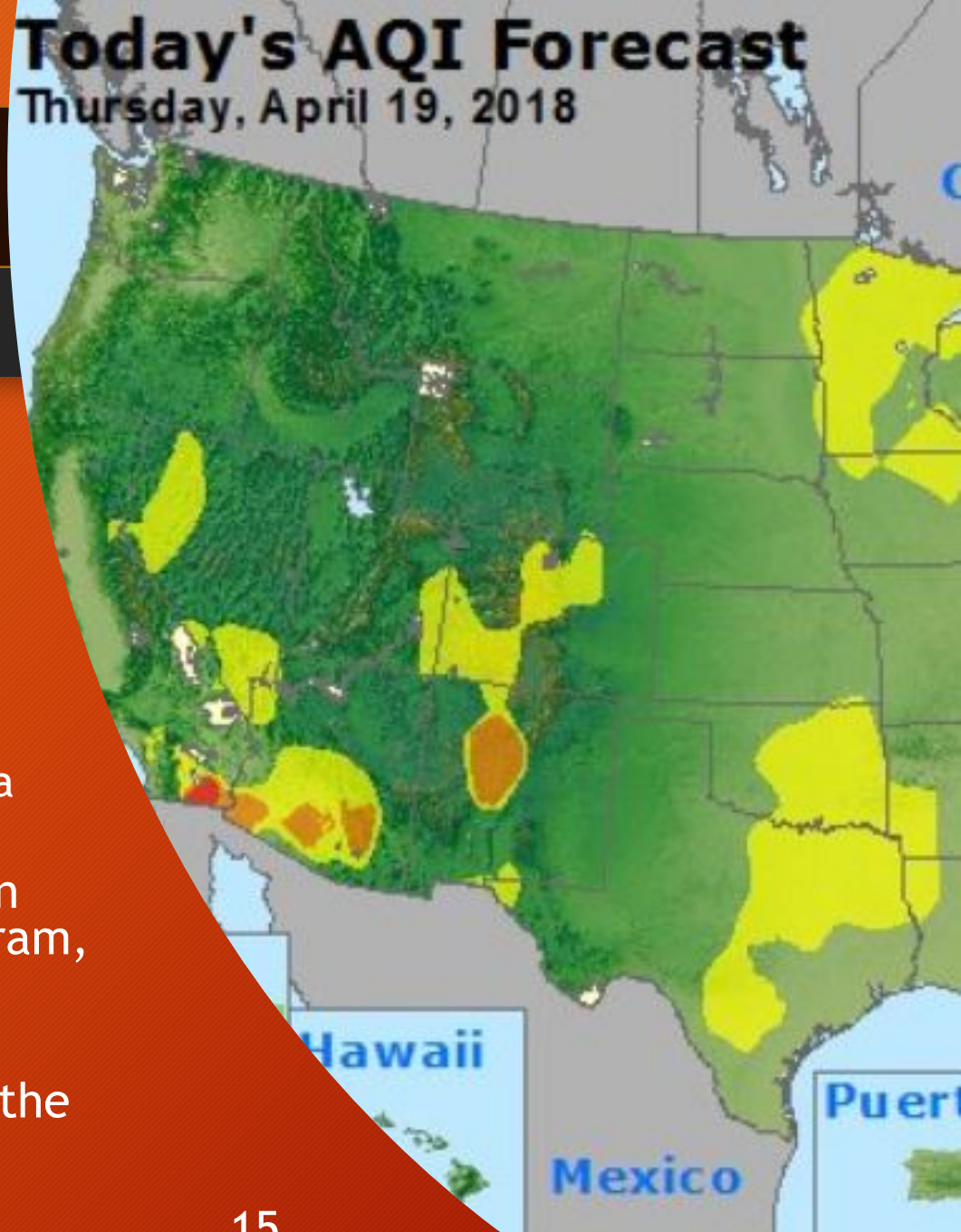
Current Air Quality - the NowCast

- Algorithms used to show real-time air quality as an estimated AQI
 - Relate hourly air quality measurements to the 8-hour AQI (ozone) or the 24-hour AQI (PM)
 - Will be shown on AirNow as “NowCast AQI”
- Designed to:
 - Provide real-time air quality information in a format that is easy to understand (the popular color-coded AQI scale)
 - Help at-risk groups quickly recognize the times when they may want to adjust outdoor activities
 - Encourage outdoor activity at times when air quality is better (especially important when the daily forecast is “orange” or above).

AQI forecasts

- Predict the *next day's* AQI
- Cover the same time periods -
 - Maximum daily eight-hour average for ozone; 24-hour average for PM
 - Not a “high” for the day like a temperature forecast
- Great planning tool - popular in news media, used in Flag Program, etc.
- But don't show the air quality changes that can occur during the day

Today's AQI Forecast
Thursday, April 19, 2018



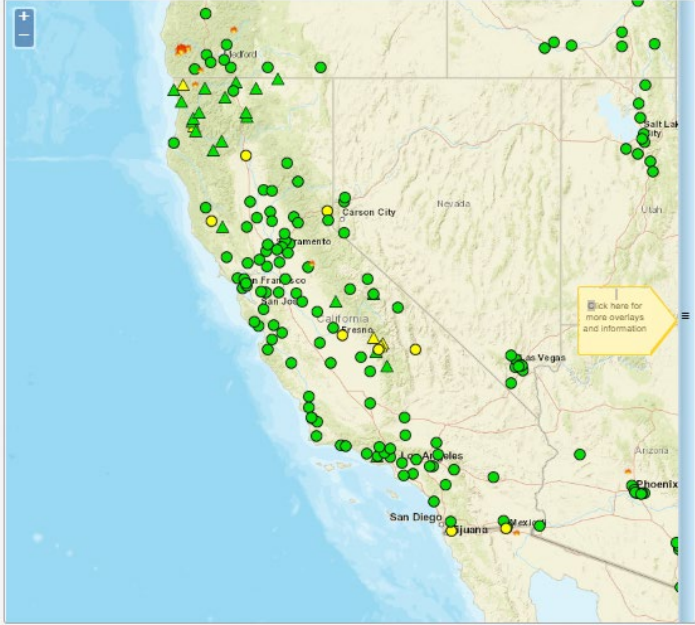
AirNow

AirNow AQI & Health Fires Maps & Data Education International Resources

Alert: The new AirNow.gov - system status

Get Current and Forecasted Air Quality for Your Area

Current Fires



Map of the Western United States showing current fire locations. The map includes labels for major cities such as San Francisco, Sacramento, Carson City, Reno, San Diego, and Phoenix. A yellow callout box on the map says "Click here for more overlays and information".

Current Fires

- Map of Current Fires
- Smoke Advisories

Fire Resources

- Wildfire Smoke Guide for Public Health Officials

Fires and Health

- Wildfire Guide Factsheets
- How Smoke from Fires Can Affect Your

https://airnow.gov/index.cfm?action=topics.smoke_wildfires

California Only- 1300 and 1400 Calls

1300 (1PM) Call - Every Day	1400 (2PM) Call -- as needed
<p data-bbox="252 568 1210 706"><u>Conference Line: 888-844-9904</u> <u>9113085#</u></p> <p data-bbox="369 721 1210 859">Contact: Trent Proctor USFS tprocter@fs.fed.us</p> <p data-bbox="155 873 1210 1082">Topic: Smoke from wildfires and Rx fires across CA. Brief report outs from several individuals.</p>	<p data-bbox="1485 568 2397 706"><u>Conference Line: 888-405-8211,</u> <u>6959739#</u></p> <p data-bbox="1531 721 2397 929">Contact: Charles Pearson, ARB P: (916) 322-7054 pearson.charles@arb.ca.gov</p> <p data-bbox="1569 943 2397 1082">Topic: Smoke monitoring and communication needs.</p>

EPA Factsheets for Wildfire Smoke

- [Prepare for Fire Season Factsheet](#)
- [Indoor Air Filtration Factsheet](#)
- [Reduce Your Smoke Exposure Factsheet](#)
- [Protect Yourself From Ash Factsheet](#)
- [Respiratory Protection Factsheet](#)
- [Protecting Children from Wildfire Smoke and Ash Factsheet](#)
- [Protect Yourself From Ash Factsheet](#)
- [Protect Your Pets from Wildfire Smoke Factsheet](#)
- [Protect Your Large Animals and Livestock from Wildfire Smoke Factsheet](#)
- [Wildfire Smoke, A Guide for Public Health Officials, 2016](#)

EPA The right respirator* and proper fit can reduce your exposure to wildfire smoke.

Do not use wet or dry paper masks, and tissues will **NOT** filter out wildfire smoke. Look for respirators (masks) marked NIOSH with N95 or P100. They can be found online, or in hardware, home repair, or drugstores.

*Respirators are not designed to fit children. Facial hair prevents proper fit and reduces effectiveness.

1 strap above and 1 strap below ears. Do not cross. Fits over nose and under chin. Push bar to shape of nose. NIOSH with N95 or P100.

Respirator should collapse as you breathe in and not let air in from the sides.

Ask your doctor before using if you have heart or lung health issues. Throw mask away if it's dirty or you find it difficult to breathe. If you are dirty or nauseous, go to where there is less smoke and seek medical attention.

Use a respirator only after first trying other, more effective methods to avoid smoke. That includes staying indoors and reducing activity. When possible, people at risk should move away from the smoky area.

airnow.gov

EPA Reduce health risks in areas with wildfire smoke:

Follow these tips, especially if someone in your family (including you) has heart or breathing problems, is an older adult or child, or is pregnant.

DO

- Stay inside
- Pay attention to local advisories and check air quality ([airnow.gov](#))
- Set car A/C on recirculate (to keep smoke out)
- Keep a supply of medicine and non-perishable food
- Use a well-fitted N95 or P100 respirator if you go outside when it is smoky
- Prepare to evacuate if smoke levels get too high

KEEP AIR CLEAN

Close windows and doors. Close fresh intake on A/C units. If your home is too warm, you can	Use a portable air cleaner with HEPA filters properly sized for a specific room.
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Wildfire Smoke: A Guide for Public Health Officials

- A collaborative document produced by CDPH, CARB, US EPA, USFS, University of Washington, public health agencies
- A guide that includes several tools for public health officials to use during wildfire smoke events
- Being revised to include, FAQ's about different topics



CHAPTER TWO

Specific strategies to reduce smoke exposure

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Stay indoors	19
Reduce activity	19
Reduce additional sources	19
Air conditioners and filters	20
Room air cleaners	21
Ozone generators	23
Clean room	23
Humidifiers	4
Inside vehicles	24
Respiratory protection	25
Ceal air shelters	30
Closures	30
Evacuation	30
Summary	31

"The emissions from wildfire smoke have tremendous public health implications."

EPA's Dr. Wayne Casico in National Geographic

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https://www3.epa.gov/airnow/wildfire_may2016.pdf (current)

Smoke Ready Tool Box for Wildfires: Guides, Fact Sheets and Other Resources

<https://www.epa.gov/air-research/smoke-ready-toolbox-wildfires>

Smoke-Ready Toolbox for Wildfires

Wildland fires produce air pollution that impacts people's health and other aspects of daily life. The increased frequency and intensity of wildfires in the United States are adversely affecting air quality and putting more people at a health risk from exposure to smoke. Public health officials can use the resources in the Smoke Ready Toolbox to help educate the public about the risks of smoke exposure and actions people can take to protect their health.



Smoke and Your Health

- [Wildfire Smoke Frequently Asked Questions](#)
- [How Smoke from Fires Can Affect Your Health](#)
- [Particle Pollution and Your Patients' Health Course](#)
- [More Information](#)



Guides, Fact Sheets, and



Air Quality Conditions and Forecasts

- [AirNow](#)
- [AirNow current fire conditions](#)
- [More Information](#)



Wildfire Smoke Guide

- [Wildfire Smoke: A Guide for Public Health](#)

Featured Resources



New resource en español now available:

- [Caja de herramientas "Smoke Ready" \(Listo para el humo\) para incendios forestales](#)

New public health factsheets now available.

- [Prepare for Fire Season Factsheet](#)
- [Indoor Air Filtration Factsheet](#)
- [Reduce Your Smoke Exposure Factsheet](#)
- [Protect Yourself from Ash Factsheet](#)
- [Protecting Children from Wildfire Smoke and Ash](#)

Smoke-Ready Toolbox for Wildfires: Guides, Fact Sheets and Other Resources

This page provides guides, fact sheets, brochures, infographics and web resources for use in learning about the health impacts of wildland fire smoke.

Guides

- [Wildfire Smoke: A Guide for Public Health Officials](#) (76 pp, 2.3 MB K, [About PDF](#))
- [Air Quality Guide for Particle Pollution](#)
- [Air Quality Guide for Particle Pollution in Spanish](#) (2 pp, 66 K, [About PDF](#))
- [Air Quality and Outdoor Activity Guidance for Schools](#) (2 pp, 266 K, [About PDF](#))
- [Guide to Air Cleaners in the Home](#)

Public Health Fact Sheets

- [Prepare for Fire Season](#)
- [Indoor Air Filtration](#)
- [Reduce Your Smoke Exposure](#)
- [Protect Yourself From Ash](#)
- [Respiratory Protection](#)
- [Protecting Children from Wildfire Smoke and Ash](#)

Research Fact Sheets

- [Fact Sheet on Smoke Sense App](#)
- [Community Health Vulnerability Index](#)
- [Wildland Fire Research to Protect Health and the Environment](#)

Infographics Available to Order

- Two-sided, 7.5 x 5.5 inch infographic cards
- Can be ordered for free from this site
- Order as many as you want! We have thousands!

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Follow these tips, especially if someone in your family (including you!) has heart or breathing problems, is an older adult or child, or is pregnant.

DO

- Stay inside
- Pay attention to local advisories and check air quality (airnow.gov)
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- Keep a supply of medicine and non-perishable food
- Use a well-fitted N95 or P100 respirator if you go outside when it is smoky
- Prepare to evacuate if smoke levels get too high

KEEP AIR CLEAN

Close windows and doors. Close fresh intake on A/C units. If your home is too warm, try to stay with friends or relatives.	Use a portable air cleaner with HEPA filters properly sized for a specific room.
--	--

DON'T

- X Play or exercise outdoors
- X Fry or broil foods, which can add particles to indoor air
- X Use a fireplace, gas logs or gas stove
- X Smoke indoors
- X Vacuum, it can stir up dust

airnow.gov

EPA The right respirator* and proper fit can reduce your exposure to wildfire smoke.

Cloth (wet or dry), paper masks, and tissues will **NOT** filter out wildfire smoke. Look for respirators (masks) marked NIOSH with N95 or P100. They can be found online, or in hardware, home repair, or drugstores.

* Respirators are not designed to fit children. Facial hair prevents proper fit and reduces effectiveness.

1 strap above and 1 strap below ears. Do not cross.

Pinch bar to shape of nose

Fit over nose and under chin

NIOSH with N95 or P100

Respirator should collapse as you breathe in and not let air in from the sides.

Ask your doctor before using if you have heart or lung health issues.	Throw mask away if it's dirty or you find it difficult to breathe.	If you are dizzy or nauseous, go to where there is less smoke and seek medical attention.
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Use a respirator only after first trying other, more effective methods to avoid smoke. That includes staying indoors and reducing activity. When possible, people at risk should move away from the smoke area.

airnow.gov

EPA United States Environmental Protection Agency

Environmental Topics | Laws & Regulations | About EPA | Search EPA.gov

Related Topics: Air Research | CONTACT US | SHARE

How to Order the Infographic Card on "Reduce Health Risks in Areas with Wildfire Smoke"

EPA has developed a two-sided infographic card with information on how to reduce exposure to wildfire smoke, how to select the correct respirator mask and how to properly wear the mask to protect your health.

You can order free print copies of the infographic by clicking on the link below. There is no limit to the number of cards you can order. You can also return to order more if necessary. The infographic cards are designed for use in public health outreach and education.

ORDER YOUR INFOGRAPHICS HERE

Download the PDFs:

- [Infographic Front: Reduce Health Risks in Areas With Wildfire Smoke](#)
- [Infographic Back: How to Use a Respirator](#)

How to Order

1. Click the "ORDER YOUR INFOGRAPHICS HERE" link
2. Click the USPS "Request Delivery" button/icon on the bottom right of the Document Display screen
3. Fill in the form, making sure to note how many you would like to order in the "Special Instructions" box
4. Click the "Submit Order" button.

Contact Us to ask a question, provide feedback, or report a problem.

<https://www.epa.gov/air-research/how-order-infographic-card-reduce-health-risks-areas-wildfire-smoke>



Air Quality Flag Program

Air Quality Guide for Particle Pollution

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Hazardous (301-500)	Everyone	Everyone: Avoid all physical activity outdoors. Sensitive groups: Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.

Contact Lauren Maghran
Maghran.lauren@epa.gov or
 Katie Stewart at
Stewart.Kathleen@epa.gov

Smoke Sense: A Citizen Science Project

- A goal of the project is to provide entry points for members of the public to contribute to research and access data.
- This kind of involvement is mutually beneficial – it helps EPA answer questions, and it also serves as educational/data resource that communities can leverage to address issues related to air quality and health in their communities.
- This two-way interaction and communication framework is the citizen science feature in Smoke Sense.
- In the App Store or Google Play



Wildfire Smoke and IAQ

- <https://www.epa.gov/indoor-air-quality-iaq/wildfires-and-indoor-air-quality-iaq>

How Does Wildfire Smoke Affect Indoor Air Quality?

Outdoor air, including fine particles from wildfire smoke, can enter your home in a few ways:

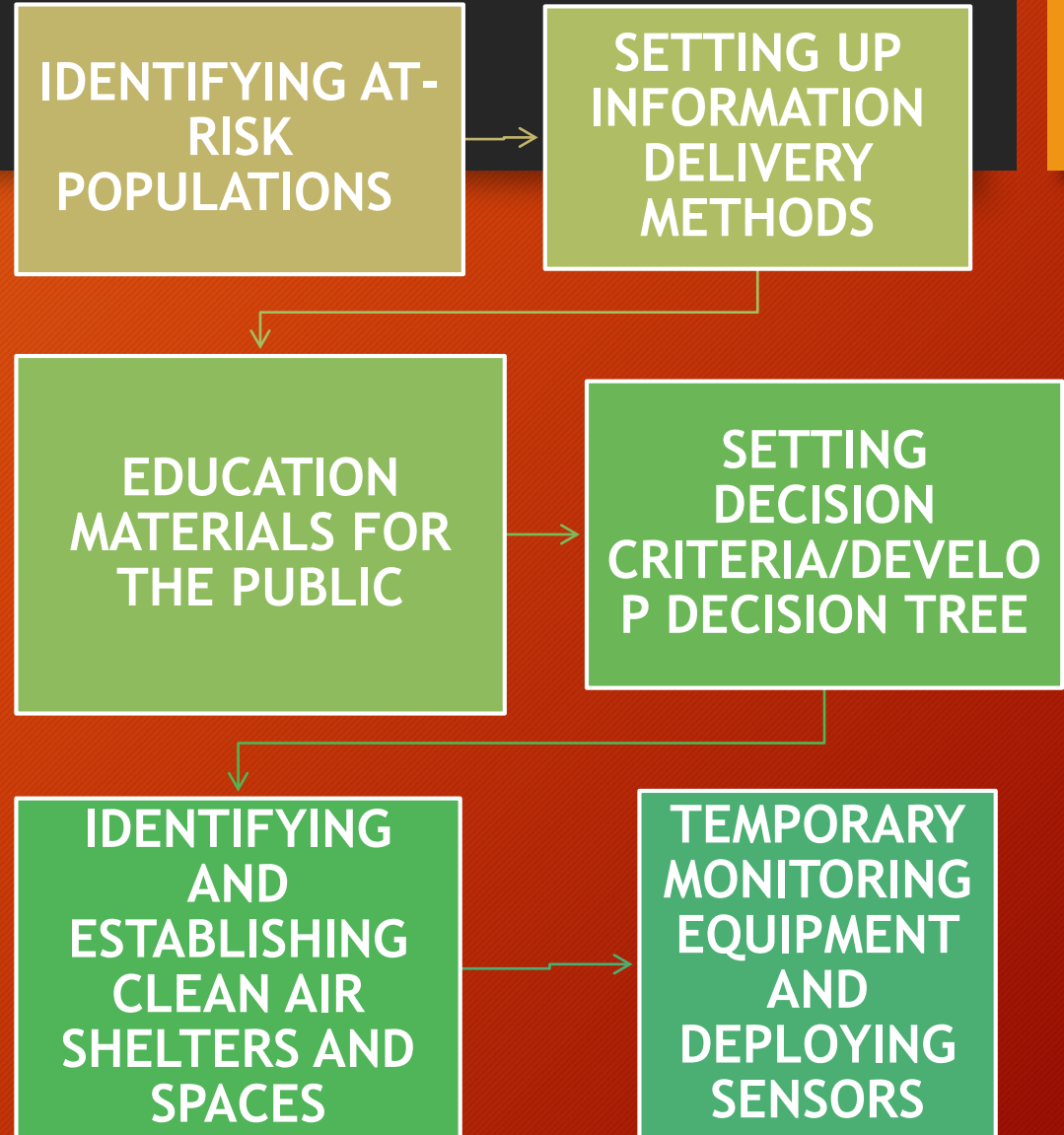
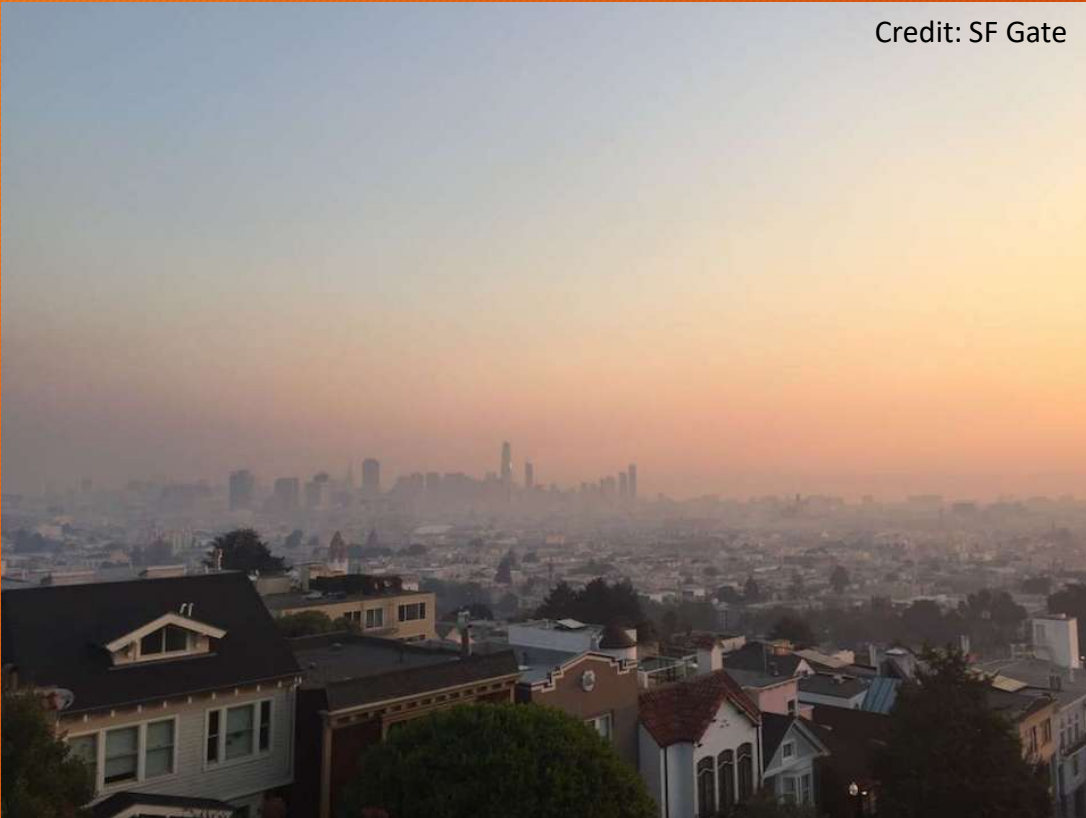
- through open windows and doors, which is known as **natural ventilation**.
- through **mechanical ventilation** devices such as bathroom or kitchen fans that vent to the outdoors, or heating, ventilation and air conditioning (HVAC) systems with a fresh air intake.
- through small openings, joints, cracks, and around closed windows and doors through a process called **infiltration**.



Ways that outdoor air can enter a home

Smoke Ready Community Framework

Credit: SF Gate



Outreach Email: Feedback from Tribes

THANK YOU!

- Please be sure to grab a handout with all this information.
- We can send this presentation to you

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