



# Tribal Housing Support from the EPA

Erin McTigue, MPH  
EPA Region 10

*Photo: Native Village of Kwethluk, Alaska*

# Region 10 Tribes Rate Indoor Air Pollution as a Priority Air Concern

- Ventilation and filtration
- Home heating
- Wildfire smoke
- COVID
- How to conduct assessments
- Tools and technology
- Asthma and lung infections



# EPA Roles in Supporting Tribal Housing



## **Technical assistance**

Training, science, technical guidance, outreach tools



## **Coordination**

of federal agencies, funders, others on tribal indoor air and healthy homes



## **Funding**

Tribal enviro. programs & technical assistance providers  
Tribal Healthy Homes Network, ANTHC, ITEP

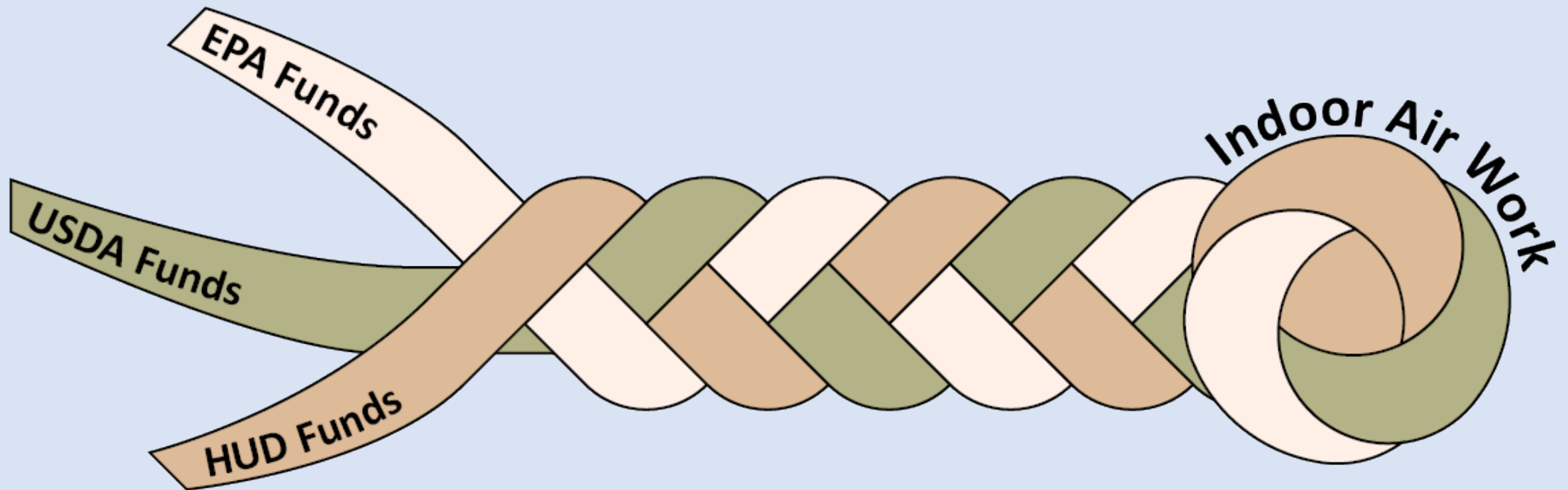


## **'Voluntary' indoor air program**

Limited regulatory authority for the indoor environment

# Funding Resources

**Tribes that collaborate among departments and braid funding sources have had success in reaching indoor air goals.**



# Housing- Related EPA Grant Authorities

State & Tribal Indoor Radon Grant (SIRG)

Indian General Assistance Program  
(IGAP) Grants

Tribal Clean Air Act (CAA) Grants

Environmental Justice Grants

Pollution Prevention Grants

# Wildfire Smoke Preparedness in Community Buildings Grant Program

- Eligible activities may include research, investigations, experiments, demonstrations, surveys, and studies intended for the assessment, prevention, control, or abatement of wildfire smoke hazards in community buildings (including schools) and related activities.
- Feedback on design of grant program requested - [WildfireSmokeGrants\\_Feedback@epa.gov](mailto:WildfireSmokeGrants_Feedback@epa.gov) by 11/2

# EPA PROGRAMS

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EPA received **\$41.5 billion in appropriations** to support 24 new and existing programs. This makes EPA the second largest recipient of discretionary funding after USDA (see exhibit to right). In addition, Superfund will receive a projected \$11.7 billion in tax revenue.

**Six new EPA programs account for 98% of this total funding:**

- **Greenhouse Gas Reduction Fund (\$27 billion)** – Provide capital to greenhouse gas mitigation projects not currently able to access private capital, particularly in low-income and disadvantaged communities.
- **Climate Pollution Reduction Grants (\$5 billion)** – Provide grants at the state, local, and Tribal level to develop plans to reduce greenhouse gas emissions and implement those plans. At least one grant will go to an eligible entity in every state.
- **Environmental and Climate Justice Block Grants (\$3 billion)** – Fund community-based nonprofit organizations to support a wide range of climate and environmental justice activities.
- **Grants to Reduce Air Pollution at Ports (\$3 billion)** – Award rebates and grants for ports to purchase and install zero-emission technology and develop climate action plans.
- **Methane Emissions Reduction Program (\$1.55 billion)** – Fund grants and technical assistance to accelerate emissions reduction from petroleum and natural gas systems. Also establish a methane waste emissions charge starting at \$900 per ton in 2024 and increasing to \$1,500 per ton by 2026.
- **Clean Heavy-Duty Vehicles (\$1 billion)** – Provide grants, rebates, and contract support to replace heavy duty vehicles with zero emission alternatives. \$400 million is specifically for nonattainment areas.



# ADDITIONAL PROGRAMS TOTAL \$906 MILLION

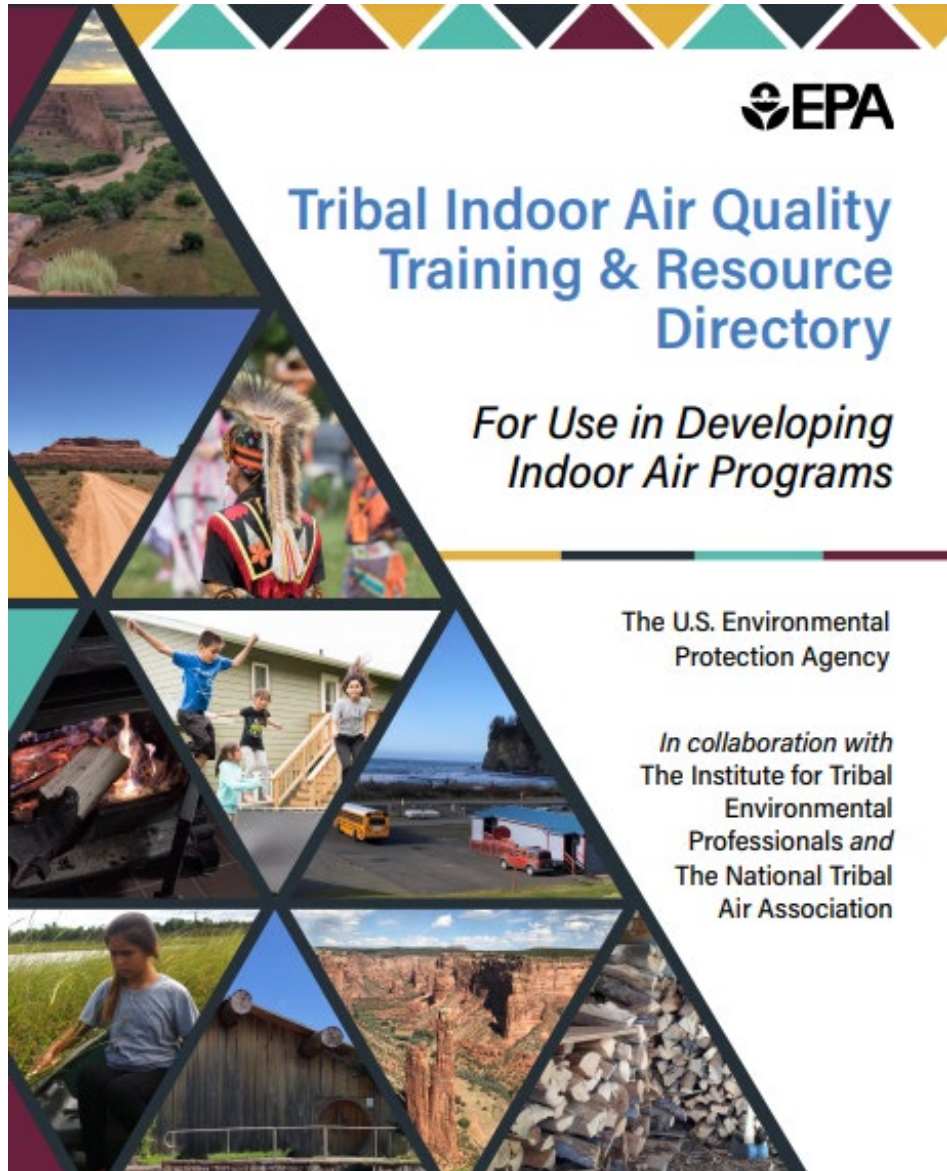
National Program Office and Program	Funding (\$)
<b>Office of Air (OAR)</b>	<b>491,000,000</b>
Funding to Address Air Pollution - Fenceline Air Monitoring & Screening Air Monitoring	235,500,000
Low Emissions Electricity Program	87,000,000
Diesel Emissions Reductions	60,000,000
Funding to Address Air Pollution at Schools	50,000,000
Funding for Implementation of the American Innovation & Manufacturing Act on HFCs	38,500,000
Funding for Section 211(o) of the Clean Air Act (Renewable Fuels)	15,000,000
GHG Corporate Reporting	5,000,000
<b>Office of Chemical Safety and Pollution Prevention (OCSPP)</b>	<b>350,000,000</b>
Environmental Product Declaration Assistance	250,000,000
Low-Embodied Carbon Labeling for Construction Materials	100,000,000
<b>Permitting (Multiple Offices)</b>	<b>40,000,000</b>
Efficient, Accurate, and Timely Permitting Reviews	40,000,000
<b>Office of Enforcement and Compliance Assurance (OECA)</b>	<b>25,000,000</b>
Funding for Enforcement Technology & Public Information	25,000,000

## KEY TAKEAWAYS

- **Many of these programs build on existing programs** and can proceed quickly through established relationships with state and local partners.
- **OCSPP's embodied carbon programs will inform other infrastructure projects** such as roads, bridges, and ports.
- **A major investment in permitting will bolster EPA's capacity** to provide quality, timely environmental reviews and permitting for critical projects.

Technical Resources

# New! Tribal Indoor Air Resource Directory





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## Mold Resources Continued

### ➤ [Tribal Mold Webinars](#)

The Institute for Tribal Environmental Professionals presents a few webinars that discuss the basics of mold and moisture and how to craft prevention and remediation plans.

### ➤ [EPA's Mold Page](#)

The hub for all of EPA's mold and moisture resources.

### ➤ [EPA's Brief Guide to Mold, Moisture, and Your Home](#)

A distributable resource for homeowners and renters on how to clean up mold growth and prevent future mold problems in the home.

#### Policy Highlight

[Tulalip Tribes Housing Department Mold and Mildew Policy](#) Tribal policy example with tenant obligations and guidelines to prevent and quickly remediate any mold or mildew problems.

### ➤ [CDC's Mold Page](#)

Information on the health effects of mold exposure and how to prevent, safely clean up, and control mold. This webpage also includes [information about mold for clinicians](#).

For resources specific to the response, recovery, and mitigation of flood emergencies, see the [Disaster Preparedness and Mitigation](#) and [Disaster Response and Recovery](#) sections on pages 21 and 23.

### ➤ [HUD's Mold & Moisture Prevention: A Guide for Residents in Indian Country](#)

A detailed resource guide written for tribal homeowners and renters about how to recognize and mitigate mold problems and prevent future mold growth.

### ➤ [EPA's Mold Remediation in Schools and Commercial Buildings](#)

A detailed resource for leaders and managers of public buildings to help promote and maintain mold-free environments.

### ➤ [EPA's Moisture Control Guidance for Building Design, Construction and Maintenance](#)

A detailed resource for anyone who designs, builds, operates or maintains buildings and heating, ventilating and air conditioning (HVAC) equipment. It provides practical guidance on how to control moisture in buildings.

## Disaster Preparedness & Mitigation



Bedrock Fire on Nez Perce Reservation. Photo courtesy of the Nez Perce Tribe

Since the year 2000, **286** disasters have been declared by tribal nations. 1

As of 2015, only **117 out of 566** federally recognized tribes had a FEMA-approved disaster mitigation plan in effect. 2

Good preparations today can decrease fear, reduce losses and speed recovery in a time of disaster or emergency. 3

Is your Tribe Ready?  
**Prepare For Emergencies in Tribal Nations.**

1. [Federal Emergency Management Agency](#) 2. [Lucy Carter](#) 3. [Ready.gov](#)

Preparation and response to weather-related and man-made emergencies is particularly important when it comes to indoor environments, since humans spend most of their time indoors, and rely on indoor spaces for shelter.

## Resources

### ➤ [Emergency Preparedness Handbook for Tribes](#)

A resource to help tribes develop and implement an emergency preparedness plan for responding to natural and man-made disasters if and when they occur.

### ➤ [Tribal Climate Change Guide](#)

From the University of Oregon, this guide hosts tribal funding opportunities, resources, and examples of climate adaptation plans.

### ➤ [FEMA Tribal Affairs](#)

FEMA's tribal website that includes more information and links to FEMA tribal [consultation information](#), and [policies, disaster declarations](#) and [guidance](#) and mitigation information.

### ➤ [EPA's Emergencies and IAQ](#)

Learn about how to prepare indoor environments for emergencies and disasters to protect healthy IAQ. This page includes information on power outages and portable generators, flood cleanup, and how to create a clean room indoors during wildfires.

# Protecting Building Occupants From Smoke During Wildfire and Prescribed Burn Events

BY TOM JAVINS, P.E. LIFE MEMBER ASHRAE; GAIL ROBARGE; EMILY GIBB SNYDER, PH.D.; GREGORY NILSSON; STEVEN J. EMMERICH, FELLOW ASHRAE

ASHRAE Guideline 44P, *Protecting Building Occupants from Smoke During Wildfire and Prescribed Burn Events*, will provide HVAC and building measures to minimize occupant exposures and health impacts from smoke during wildfire and prescribed burn smoke events. This column summarizes the planning framework for Guideline 44P, which is being shared by the guideline committee to provide immediate information on this pressing issue while the committee continues work on the complete guideline.

The planning framework includes information for building managers on developing their Smoke Readiness Plan, preparing for smoke events by having supplies on hand and testing procedures in advance, and knowing when and how to implement measures in their plans. The document, "Planning Framework for Protecting Commercial Building Occupants from Smoke During Wildfire Events," can be found at <https://tinyurl.com/yxyuqh72>.

## What is the Concern and Who is at Risk?

In 2020, in the U.S. alone, over 58,000 wildfires

occurred, burning more than 10 million acres (4 million ha).<sup>1</sup> Increasing numbers of wildfires and large numbers of people living at wildland-urban interfaces makes protecting building occupants from smoke critically important. Wildfire smoke is composed of fine particulate matter (PM<sub>2.5</sub>, particles less than 2.5 μm in diameter) and gases. Although wildfire smoke contains multiple contaminants, this document focuses on controlling exposure to PM<sub>2.5</sub>. Breathing high concentrations of these pollutants can cause respiratory and cardiovascular health effects, especially for those

Tom Javins, P.E., is a mechanical engineer at the University of Montana in Missoula, Mont. Gail Robarge is a physical scientist and Emily Gibb Snyder, Ph.D., is a chemist



## Recommendations for Reducing Wildfire Smoke in Commercial Buildings and Schools

When a community is impacted by a wildfire, reducing smoke infiltration into buildings is important to protecting public health. Smoke can enter buildings through a variety of ways, including a building's heating, ventilation and air conditioning (HVAC) system.

Recommendations to help building owners prepare their HVAC systems for wildfire smoke are available in the *Planning Framework for Protecting Commercial Building Occupants from Smoke During Wildfire Events*.

This interim guidance document is offered by ASHRAE, (formerly the American Society of Heating, Refrigerating and Air Conditioning Engineers) and is available to the public free of charge. The document was developed by ASHRAE's Guideline Design Committee (GDC) 44P, which includes

### Ten Elements of a Smoke Readiness Plan

*The Planning Framework recommends a written, building-specific Smoke Readiness Plan that includes:*

1. Purchase smoke preparation supplies such as portable air cleaners and extra filters.
2. Evaluate the ability of the HVAC System to handle a higher efficiency filter, like MERV 13 or higher.
3. Conduct a full maintenance check on the HVAC system and make repairs if needed.
4. Assess and maintain adequate air flows to protect occupant health and equipment during smoke events.
5. Prepare to add supplemental filtration at the intake air vent where possible.



# Borrow Air Sensors

## Tribal Air Sensor Loan Program

Purple Air, PM + gas monitors, etc.

Contact: India Young, [young.india@epa.gov](mailto:young.india@epa.gov)

## Wildfire Smoke Air Monitoring Response Technologies Program

Sensor loans for States, Tribes, Local

Agencies: PurpleAir, ThingyAQ, VAMMS

Contact: Will Wallace, [wallace.will@epa.gov](mailto:wallace.will@epa.gov)





A BRIEF GUIDE TO  
**MOLD,  
MOISTURE,  
AND  
YOUR HOME**

# Tribal Green Building Toolkit

2015



Humankind has not woven the web of life.  
We are but one thread within it.  
Whatever we do to the web, we do to ourselves.  
All things are bound together.  
All things connect.

— Chief Seattle, 1854

 United States  
Environmental Protection  
Agency  
EPA-909-R-15-003  
July 2015



# Learn More

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

## Smoke-Ready Toolbox for Wildfires

Smoke from wildfires in the United States is adversely affecting air quality and potentially putting more people at health risk from smoke exposure. EPA, the U.S. Forest Service (USFS) and other federal, state and community agencies and organizations are working together to identify ways the public can prepare to reduce their health risk *before* a wildfire. Public health officials and others can use the resources in the Smoke-Ready Toolbox to help educate people about the risks of smoke exposure and actions they can take to protect their health.

### Smoke & Your Health



- [AirNow](#)
- [AirNow Fire and Smoke Map](#)
- [Smoke Advisories](#)
- [Fires and Your Health](#)

### Current Fires



- [Current Fires](#)
- [Current Fire Incident Information System](#)
- [NOAA's Fire Weather Outlook](#)
- [MODIS Active Fire Mapping](#)

### Wildfire Smoke and COVID-19 Resources

- [CDC: Wildfire Smoke and COVID-19](#)
- [CDC: Wildfire Smoke and COVID-19 Considerations for Cleaner Air Shelters/Spaces](#)
- [Interim Guidance for General Population Disaster Shelters During the COVID-19 Pandemic](#)
- [FAQs for Wildland Firefighters](#)
- [Environmental Health Assessment Form for Disaster Shelters](#)

Indoor Air Quality and

Related Topics: [Air Research](#)

[CONTACT US](#)

## Research on DIY Air Cleaners to Reduce Wildfire Smoke Indoors

On this page:

- [Study Overview](#)
- [UL Safety Report Findings](#)
- [Frequently Asked Questions](#)
- [DIY Air Cleaner to Reduce Wildfire Smoke Indoors Infographic](#)
- [Related Resources, Presentations, and References](#)

<https://www.epa.gov/air-research/research-diy-air-cleaners-reduce-wildfire-smoke-indoors>



DEPARTMENT OF  
ECOLOGY  
State of Washington

Make your own  
clean air fan

YOUTUBE.COM

How to make your own clean air fan  
Español <https://youtu.be/paDqilZUECw> | 한국어 <https://youtu.be/z...>

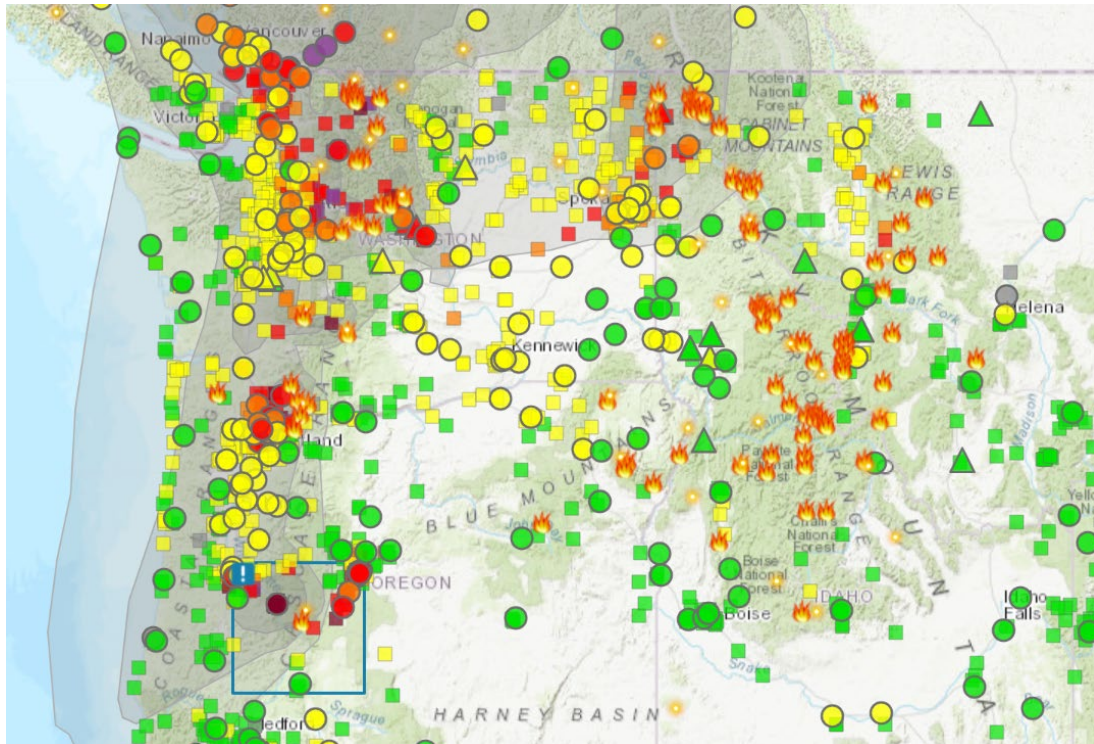
**DIY air cleaners can be effective, safe, and affordable.**

Materials: MERV 13 HEPA filter + box fan (2012 or newer)

# Outreach Materials

# EPA AirNow

- Fire & Smoke Map - Fire.AirNow.Gov
- AirNow.gov/wildfires/ - What to do before, during, and after smoke episodes



A screenshot of the AirNow website's "Fire &amp; Smoke" section. The page features a dark blue header with the AirNow logo and navigation links for "AirNow", "AQI &amp; Health", "Fires", "Maps &amp; Data", "Education", "International", "Resources", and "Recursos en español". Below the header is a search bar for "Get Current and Forecast Air Quality for Your Area" with a dropdown menu for "ZIP Code, City, or State". The main content area is divided into three columns: "Before a Fire" with the heading "BE SMOKE READY" and subtext "Know what to do before a wildfire smoke event"; "During a Fire" with the heading "WHEN SMOKE IS IN THE AIR" and subtext "Know what to do during a wildfire smoke event"; and "After a Fire" with the heading "AFTER A FIRE" and subtext "Know what to do after a wildfire smoke event". Each column includes a representative image of a wildfire scene.



# Wildfire Smoke and Indoor Air Quality: How to Create a Clean Room at Home

[Music]



U.S. Environmental Protection Agency  
Indoor Environments Division



0:03 / 5:14



Wildfire Smoke and Indoor Air Quality: How to Create a Clean Room at Home

<https://www.youtube.com/watch?v=V8DqzogXcVg>



EPA-402-F-08-004 | July 2018 | EPA Indoor Environments Division | www.epa.gov/iaq

# Guide to Air Cleaners in the Home

2<sup>nd</sup> Edition  
Portable Air Cleaners  
Furnace and HVAC Filters



Indoor Air Quality (IAQ)



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

Fits over nose and under chin

NIOSH with N95 or P100

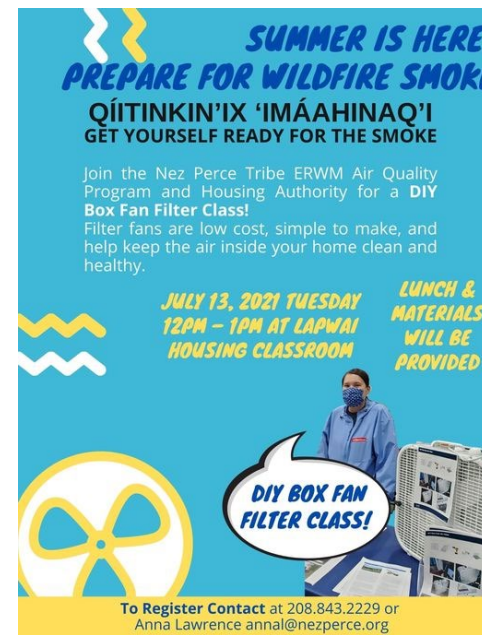
Respirator should collapse as you breathe in and not let air in from the sides.

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.
-----------------------------------------------------------------------	--------------------------------------------------------------------	-------------------------------------------------------------------------------------------

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

# Tribal Air Quality Programs as Partners



**Nez Perce Air Quality Program DIY Air Cleaner Class and Library Flag Program Partnership,**  
credit: Johna Boulafentis, NPT Air Program



**Quinault Indian Nation Air Cleaner Distribution & Healthy Homes Education Program,**  
credit: Tia Allen, QIN Air Program



# Thank you!

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