EPA Indoor Air Quality

Breathing Easier: Protecting Kids With Asthma From Wildfire Smoke

Hosted by the U.S. Environmental Protection Agency (EPA)

August 13, 2025

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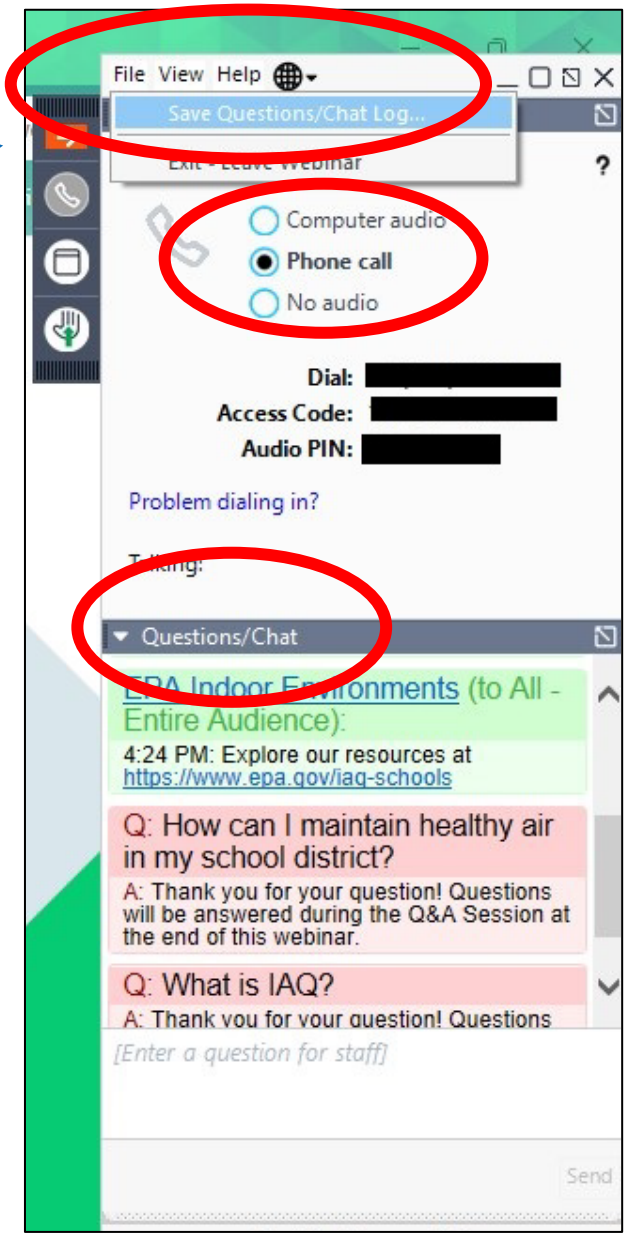


Agenda

I. **Welcome and Introductions** ..... 5 minutes

II. **Framing the Webinar** ..... 15 minutes

- A. *EPA's Asthma Program Background*
- B. *Wildfire Smoke Impacts on Asthma*
- C. *About the National Environmental Leadership Award in Asthma Management*

III. **Featured Speaker Presentation: Montana Asthma Control Program** ..... 25 minutes

IV. **Facilitated Expert Panel Discussion** ..... 40 minutes

V. **EPA Asthma and Wildfire Resources** ..... 5 minutes

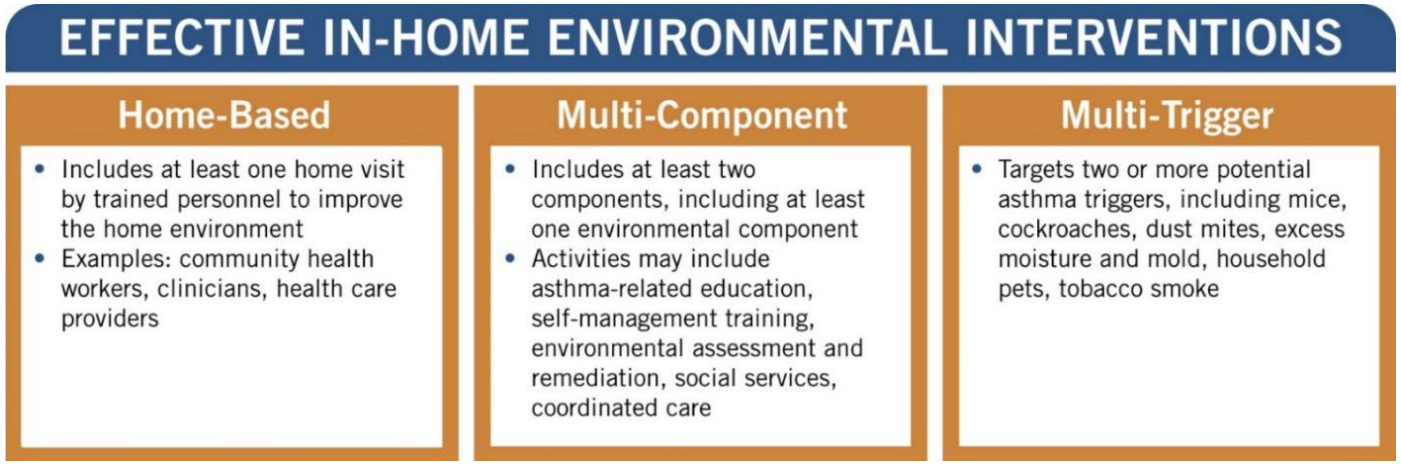
EPA's Asthma Program

Environment Plays a Critical Role in Asthma Control

Framing the Webinar

- Federal asthma guidelines recognize environmental trigger reduction as a critical component of comprehensive asthma care.*
- The evidence demonstrates that in-home environmental interventions are effective at improving asthma control.†

EPA is a federal lead for the integration of environmental risk reduction into standards of care.



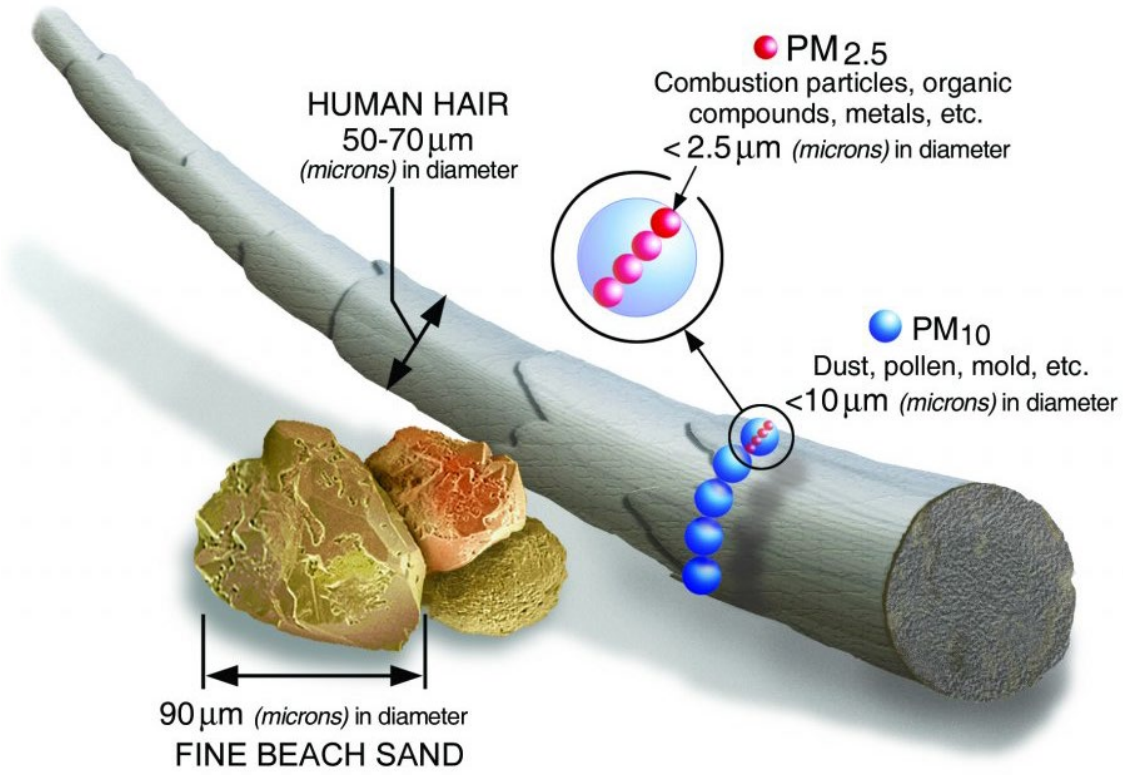
* NHLBI. *Guidelines for the Diagnosis and Management of Asthma* (EPR-3). 2007. www.nhlbi.nih.gov/health-topics/guidelines-for-diagnosis-management-of-asthma

† CDC. *The Guide to Community Preventive Services.* 2005. www.thecommunityguide.org

Wildfire Smoke and Asthma

Framing the Webinar

- Wildfire smoke is a complex mixture of gases and **fine particles** produced when wood and other organic materials burn.
- While healthy individuals may experience minimal effects, **people with chronic lung conditions such as asthma are especially vulnerable**.
- **Children are particularly susceptible to smoke**[1] for several reasons:
  1. Their respiratory systems are still developing.
  2. They breathe more air (and air pollution) per pound of body weight than adults.
  3. They're more likely to be active outdoors.



1. How Smoke from Fires Can Affect Your Health. (2021). www.airnow.gov/sites/default/files/2021-08/how-smoke-from-fire-can-affect-your-health-2021-v1-d1.pdf

EPA's Asthma Program

Achieving Results Community by Community

- EPA's Asthma Program in the Indoor Environments Division is a non-regulatory, voluntary program that **equips communities to deliver and sustain in-home environmental asthma interventions** to achieve substantial improvements in health and quality-of-life outcomes.
- We engage with and learn from communities in a variety of ways:
    - **Community of Practice (CoP)**: Our flagship CoP convenes leading practitioners across the country.
    - **Recognition for National Leaders in Environmental Asthma Management**: Spotlight best practices and approaches.
    - **AsthmaCommunityNetwork.org**: An online platform of 1,100+ community programs synthesizes and spreads learning to advance community-level action.

About the National Environmental Leadership Award in Asthma Management

Framing the Webinar

The application focuses on three areas:

1. Comprehensive Asthma Management
   - Management and Operations
   - Integrated Health Care Services
   - **Tailored Environmental Services**

2. Getting Results: Evaluation

3. Sustainability

*EPA is celebrating the **20th anniversary** of the National Environmental Leadership Award in Asthma Management.*

About the National Environmental Leadership Award in Asthma Management

Framing the Webinar

- Since 2005, 54 asthma programs have been inducted into the Awards Hall of Fame.
- The 2025 Award Winner is the **Montana Asthma Control Program**.

Today's Featured Speaker

BJ Biskupiak, Program Manager
Montana Asthma Control Program (MACP)
Montana Department of Public Health & Human Services

Montana
Asthma Control Program

Environmental Interventions to Support Asthma Control

MONTANA DPHHS
DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

Asthma in Montana

Montana Asthma Burden Report
March 2024

The **Montana Asthma Control Program** (MACP) is committed to addressing the public health concern of asthma. The MACP is responsible for Montana's asthma surveillance, as well as implementing evidence-based interventions to improve asthma control and prevention.

Population
Source: US Census

As of 2020, Montana has a population of

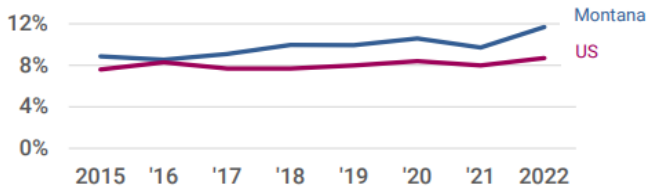
1,122,867

Asthma-related Emergency Department & Hospitalizations
Source: 2022 Montana Hospital and ED Data where asthma was the primary source of visit

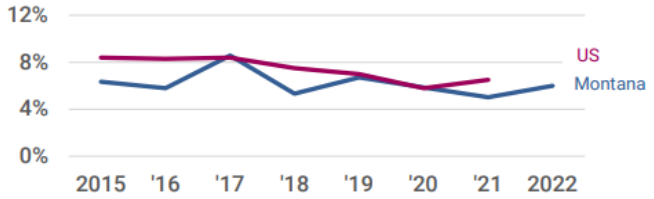
	Emergency Department Visits	Hospitalizations
Total Charges	$4,153,910	$4,856,816
Stays/Visits	1,771	308
Average Charge	$2,346	$15,769

US and Montana Asthma
Source: 2015-2022 BRFSS

From 2015 to 2022, there was a slight increase in the percentage of adults with current asthma in Montana.

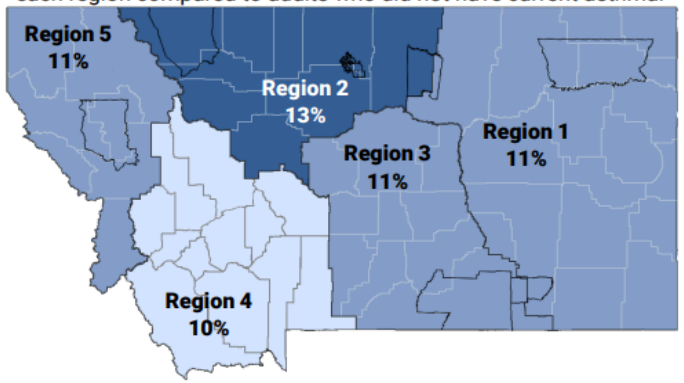


The prevalence of US and Montana children with current asthma were similar from 2015 to 2021.



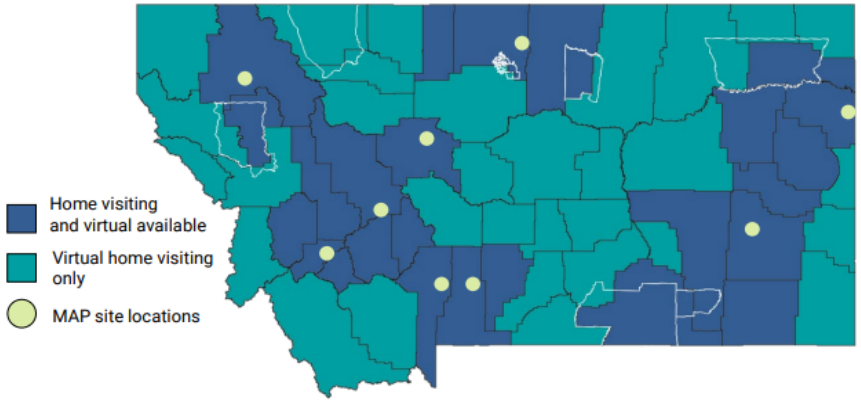
Adult Asthma Prevalence in Health Planning Regions
Source: 2021-2022 BRFSS

Region 2 is slightly higher in adult asthma prevalence compared to surrounding regions. Asthma prevalence by region was determined by calculating percentages of adults with current asthma within each region compared to adults who did not have current asthma.



Montana Asthma Home Visiting Program (MAP)

MAP provides free asthma education for people of all ages with uncontrolled asthma. The program includes 6 interactions with a trained healthcare provider over the course of one year. In-home visits are available in 25 counties, virtual visits are available in all 56 counties.



DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Agency for Toxic Substances and Disease Registry (ATSDR)

Notice of Funding Opportunity

Application due April 19, 2024

Advancing Health Equity in Asthma Control through EXHALE Strategies

Opportunity number: CDC-RFA-EH-24-0016

CDC EXHALE STRATEGIES

Key Priority Areas

Public Health & Healthcare Infrastructure

Achievement of Guidelines-Based Medical Management

Patient & Caregiver Education

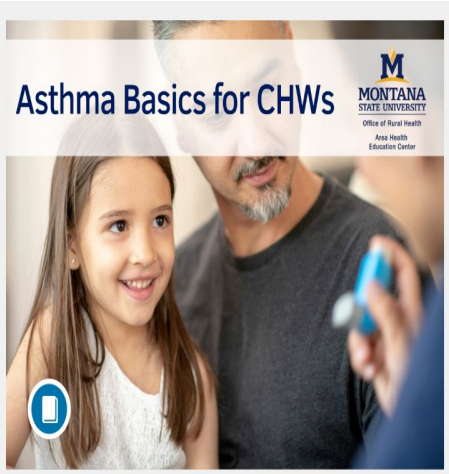
Tobacco Use Prevention & Cessation

Environmental Policies & Best Practices to Reduce Asthma Triggers

PARTNERSHIPS

- AAE — Association of Asthma Educators
- ALA — American Lung Association
- MECP — Montana Early Childhood Project
- NEEF — National Environmental Education Association
- OPI — Montana Office of Public Instruction
- University of Montana–Skaggs School of Pharmacy
- Local Public Health
- Montana Department of Environmental Quality
- Montana Health Professionals for a Healthy Climate

Healthcare Provider Education



Asthma Basics for Community Health Workers in Montana

Self-paced

Enroll Now

AAE
Association of Asthma Educators

Becoming an Asthma Educator and Care Manager Course

Asthma
Lunch & Learn
Webinars

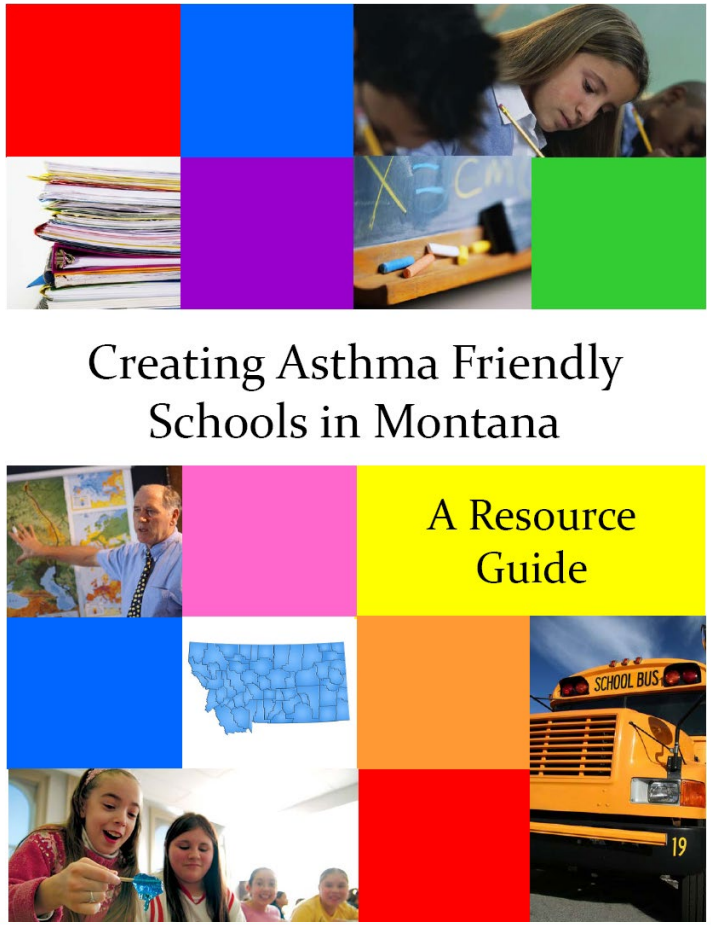
Healthcare Support

Clinical Quality Improvement Projects

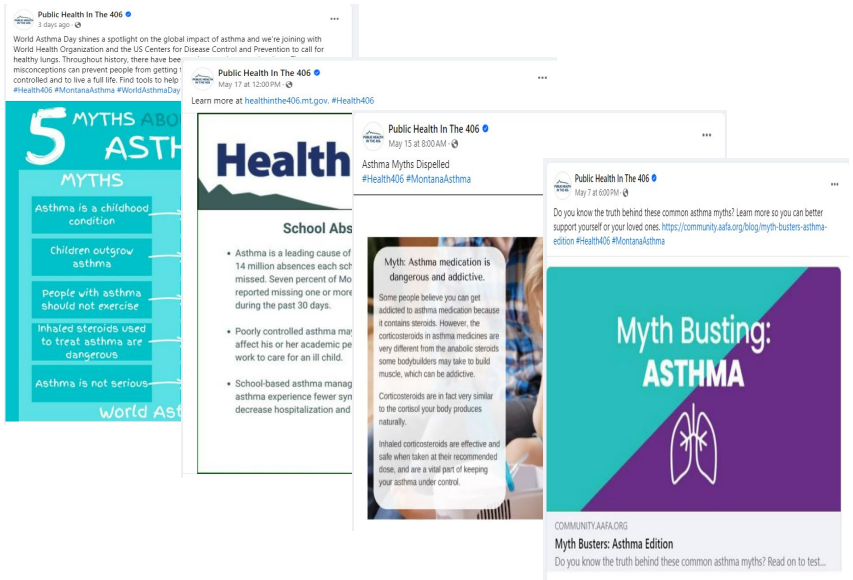
1. Improve health outcomes in patients with a diagnosis of asthma
2. Reduce asthma-related healthcare costs
3. Increase access to quality asthma care and asthma self-management education (AS-ME)
4. Increase linkages to the Montana Asthma Home Visiting Program and other services

Asthma Demo Kits/Materials

Caregiver Education



Asthma Awareness Efforts



TALKING Health IN THE 406

Asthma Podcast: "Every Breath is a Gift"

Rachel Anderson shares her daughter Mia's story. Through this two-part series, Rachel shares her entire journey, the many health challenges her daughter faced, and why she's eager to share this important story.

dphhs.mt.gov/healthinthe406/talking

MONTANA DPHHS

NEWS

Serving Montanans in their communities to improve health, safety, and well-being, and to empower independence.

FOR IMMEDIATE RELEASE
Date: May 7, 2024
Contact: Jon Ebelt, Communications Director, DPHHS, (406) 444-0936, (406) 461-3757
jebelt@mt.gov

DPHHS Recognizes World Asthma Day

May is National Asthma and Allergy Awareness Month and May 7th is World Asthma Day. This year, World Asthma Day takes place under the theme **"Asthma Education Empowers".**

The Department of Public Health and Human Services (DPHHS) and the Montana Asthma Control Program (MACP) are participating in World Asthma Day and Asthma Awareness Month to raise awareness about the health consequences and personal and financial costs of asthma.

Asthma is a common chronic disease of the respiratory tract affecting children and adults. Common symptoms include coughing, wheezing, shortness of breath, and chest tightness.

"While asthma can be controlled, asthma attacks can cause adults to miss work and children to miss school," said BJ Biskupiak of the MACP for DPHHS. "**These dangerous and sometimes life-threatening episodes reduce the quality of life for people with asthma."**

Various factors are associated with an increased risk of asthma, including environmental factors, genetic predisposition, and lifestyle factors. Asthma tends to run in families and is more likely to occur in people with allergies. Several other factors can increase the risk of asthma, including low birth weight, exposure to tobacco smoke, air pollution, or obesity.

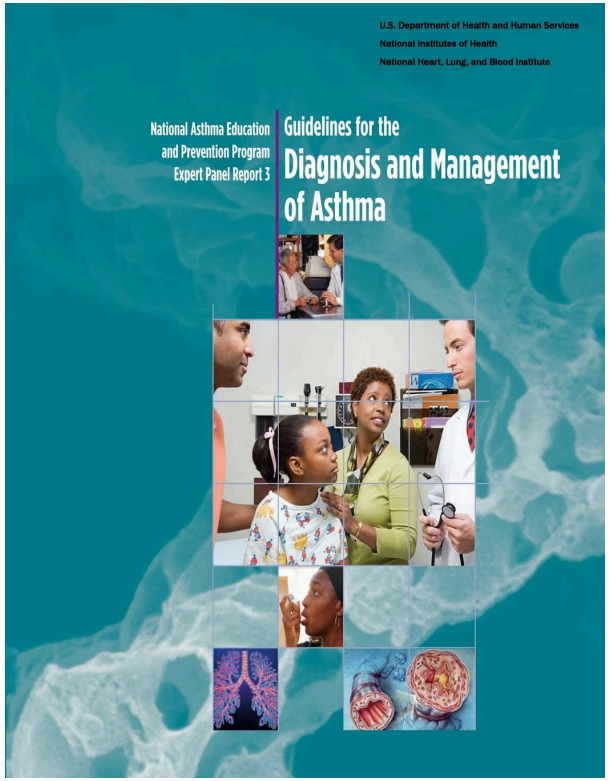
The Montana Asthma Home Visiting Program (MAP) is a free education program available to Montana residents of any age living with uncontrolled asthma. The MAP involves six points of contact over a 12-month period with a health care professional trained in asthma education and environmental trigger control. Clients receive tailored asthma education, a home environmental assessment, linkages to social support, a spacer for medication delivery, and a HEPA air purifier.

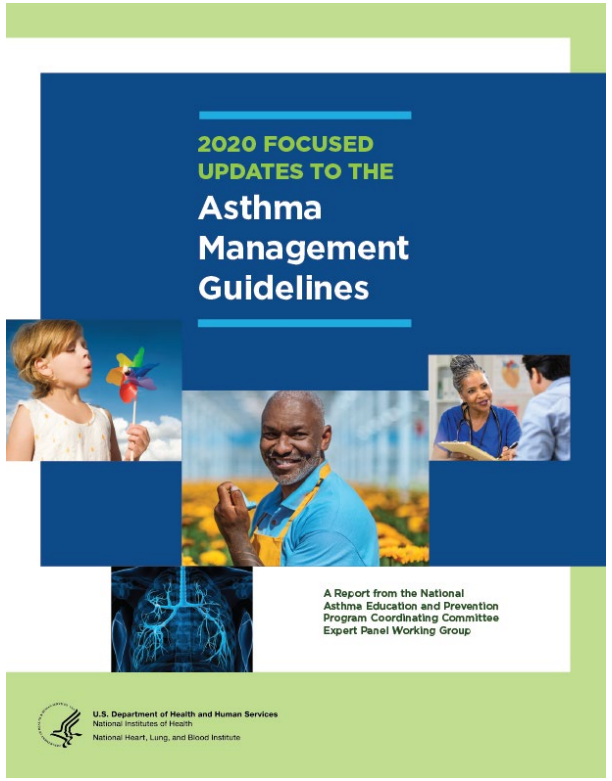
Montana
Asthma Home Visiting Program

DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

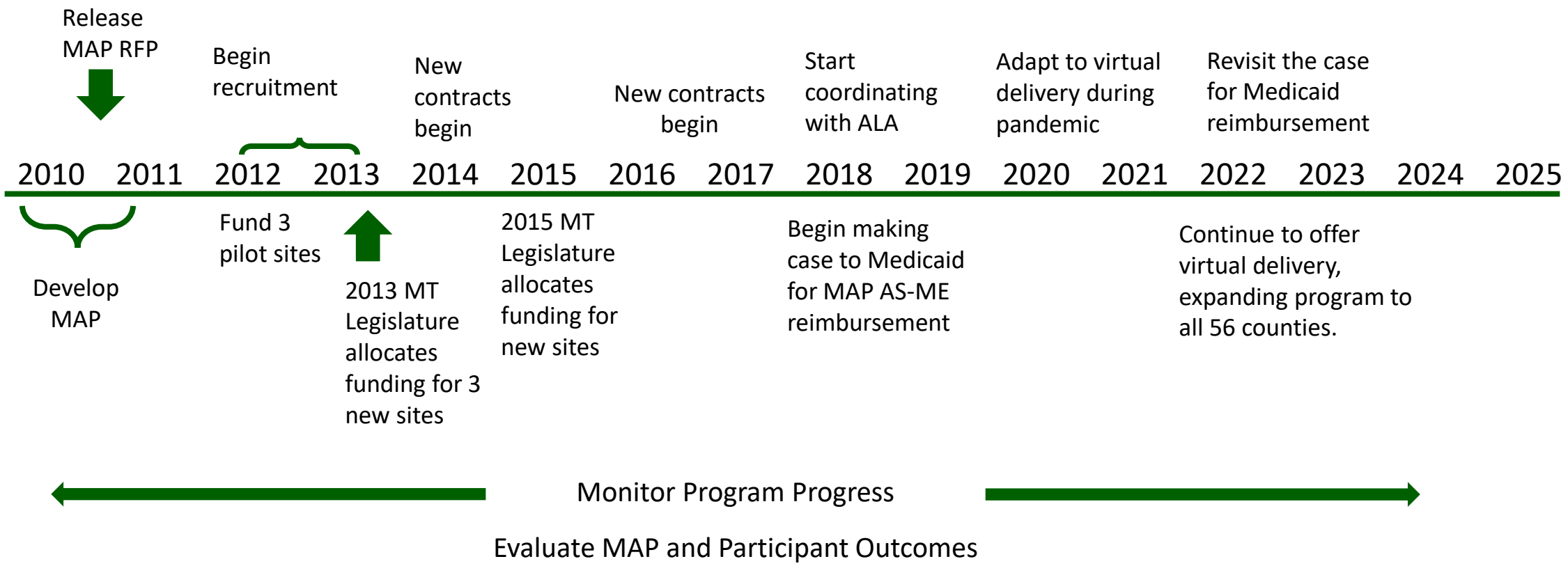
Recommended by National Guidelines

Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma





MAP Timeline



Montana Asthma Home Visiting Program

Multi-component, home-based intervention to address asthma

Target audience: Montanans with uncontrolled asthma and their families

Includes both environmental and educational components

Primary Features of MAP

Trained Professionals

Asthma Self-Management Education

Home Environmental Assessments/Intervention

Care Coordination/Referrals

Program Structure

Visit 1 (0-Month)		Data Collection, Asthma Knowledge Quiz, ACT, AS-ME, Inhaler Technique
Visit 2 (1-Month)		Discuss AAP, Asthma Knowledge Quiz, AS-ME, Home Environmental Assessment, Review Incentive Material
Visit 3 (3-month)		Review Home Envir. Assessment Results, Discuss Progress Towards Goals (AAP, Medication Usage, Etc.), AS-ME (as needed)
Visit 4 (6-month)		Data Collection, Asthma Knowledge Quiz, ACT, AS-ME, Inhaler Technique, AAP Review
Visit 5 (9-month)		Address any questions or concerns about education or environmental issues
Visit 6 (12-month)		Data Collection, Make Final Referrals (as needed), Asthma Knowledge Quiz, ACT, Final AS-ME Review (as needed)

Contractor Sites Receive

- Funding to implement program
- Marketing materials
- Referral outreach support and TA
- Annual training

Participants Receive

- 4 to 6 contacts over 12 months
- Tailored AS-ME Education
- Educational materials
- Participation incentives
- Care coordination

Home Environmental Assessments/Intervention

Home Characteristics and Asthma Triggers

Checklist for Home Visitors

Using this Home Assessment Can Help Make Homes Healthier.

A trained home visitor can help find common asthma triggers in homes and discuss ways to reduce and remove triggers. Removing asthma triggers in the home, along with proper medical care can improve health.

The checklist is organized into a Core Assessment plus two appendices (Dust Mite Module and Mold and Moisture Module). The Core Assessment can be used for all types of housing and climates, but the additional modules can be used if dust mites or mold/moisture issues are suspected by the trained home visitor. The suggested action items in this checklist are generally simple and low cost.

Glossary of Asthma Triggers Commonly Found in Homes

Combustion by-products

Triggers: Particles and gases that are formed when fuel is burned.

Where Found: Gas cooking appliances, fireplaces, woodstoves, candles, incense, cigarettes, and unvented kerosene and gas space heaters.

Dust Mites

Triggers: Body parts and droppings.

Where Found: Mattresses, bedding, carpeting, curtains, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye. They can survive in a range of climates, but they prefer high humidity.

Mold

Triggers: Mold spores, fragments, and odors.

Where Found: Indoor mold growth is often found in areas with more moisture such as kitchens, bathrooms, and basements, or areas where water damage has occurred. There are many types of mold and they can be found in any climate.

Pests

Triggers: Cockroaches—Body parts and droppings. Rodents—Fur, skin flakes, and urine.

Where Found: Areas with food and water such as kitchens, bathrooms, and basements.

Pets with fur

Triggers: Fur, skin flakes, and saliva.

Where Found: Throughout entire home.

Secondhand Smoke

Triggers: Mix of smoke from the burning end of a cigarette, pipe, or cigar and the smoke exhaled by a smoker.

Where Found: Anywhere that smoking is allowed.

Volatile organic compounds (VOCs)

Triggers: Chemical vapors that come from household items.

Where Found: Products such as cleaning agents, deodorizers, air fresheners, perfumes, paints, nail polish, and nail polish remover.

CDC Centers for Disease Control and Prevention

EPA United States Environmental Protection Agency

MOLD AND MOISTURE MODULE

Answers in a **red checkbox** (first column) are associated with moisture and potentially mold. A **yellow checkbox** (second column) indicates medium potential for concern, and a **green checkbox** (third column) indicates low potential for concern.

The more checkmarks you have in red checkboxes, the more likely it is that you have moisture and mold in your home. You can take actions shown at the end of this list.

Building

Is there a crawlspace under the building?	❑ Yes	❑ No	❑ Don't know
Are any of the bedrooms in the basement	❑ Yes	❑ No	

NOTE: Many crawl spaces and basements are damp and may have mold that can enter the home.

Heating , Ventilation and Cooling

In the bathroom where you shower or bathe, does the exhaust fan work?	❑ No ❑ N/A	❑ Don't know	❑ Yes	
If YES, how frequently do you use it when showering or bathing?	❑ Never	❑ Sometimes	❑ All the time	❑ N/A
Does your kitchen vent exhaust outdoors?	❑ No ❑ N/A	❑ Don't know	❑ Yes	
Does your clothes dryer exhaust outdoors?	❑ No	❑ Don't know	❑ Yes	❑ N/A

NOTE: Properly maintained exhaust fans that vent to the outdoors can reduce humidity levels. If there are no exhaust fans or the exhaust fans do not work or do not vent outside, high humidity can develop in the home and can lead to mold growth.

Carpet

Do you have wall-to-wall carpeting in your kitchen or bathrooms?	❑ Yes	❑ No	
What kind of floor covering is in the bedroom?	❑ Wall-to-wall carpeting	❑ Some carpeting	❑ All smooth floor

NOTE: Carpeting in areas that are prone to water spills can be hard to dry. Damp carpeting can lead to mold growth and create a place where dust mites can thrive.

Dampness

In the last 12 months, have you noticed condensation on windows in your home?	❑ Yes	❑ No	

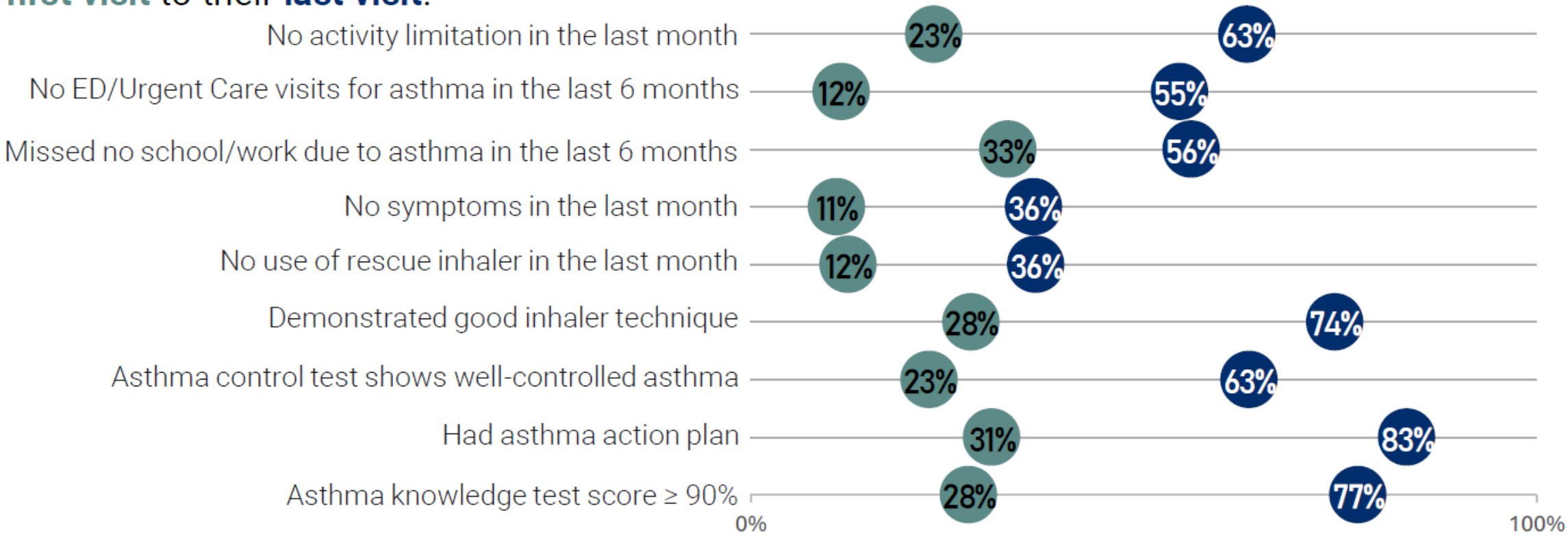
NOTE: Condensation (water droplets) on windows is a sign that moisture you may not see is forming on other surfaces. Even though you can't see this moisture, it can lead to mold growth.

Have any of your furnishings, clothes, possessions been in a building that had water damage?	❑ Yes	❑ Don't know	❑ No

NOTE: Anything that was water-damaged could have mold. Bringing those items into a new home could lead to more mold in the new home.

Participant Outcomes

An increasing number of MAP participants saw an improvement in their asthma health from the **first visit** to their **last visit**.

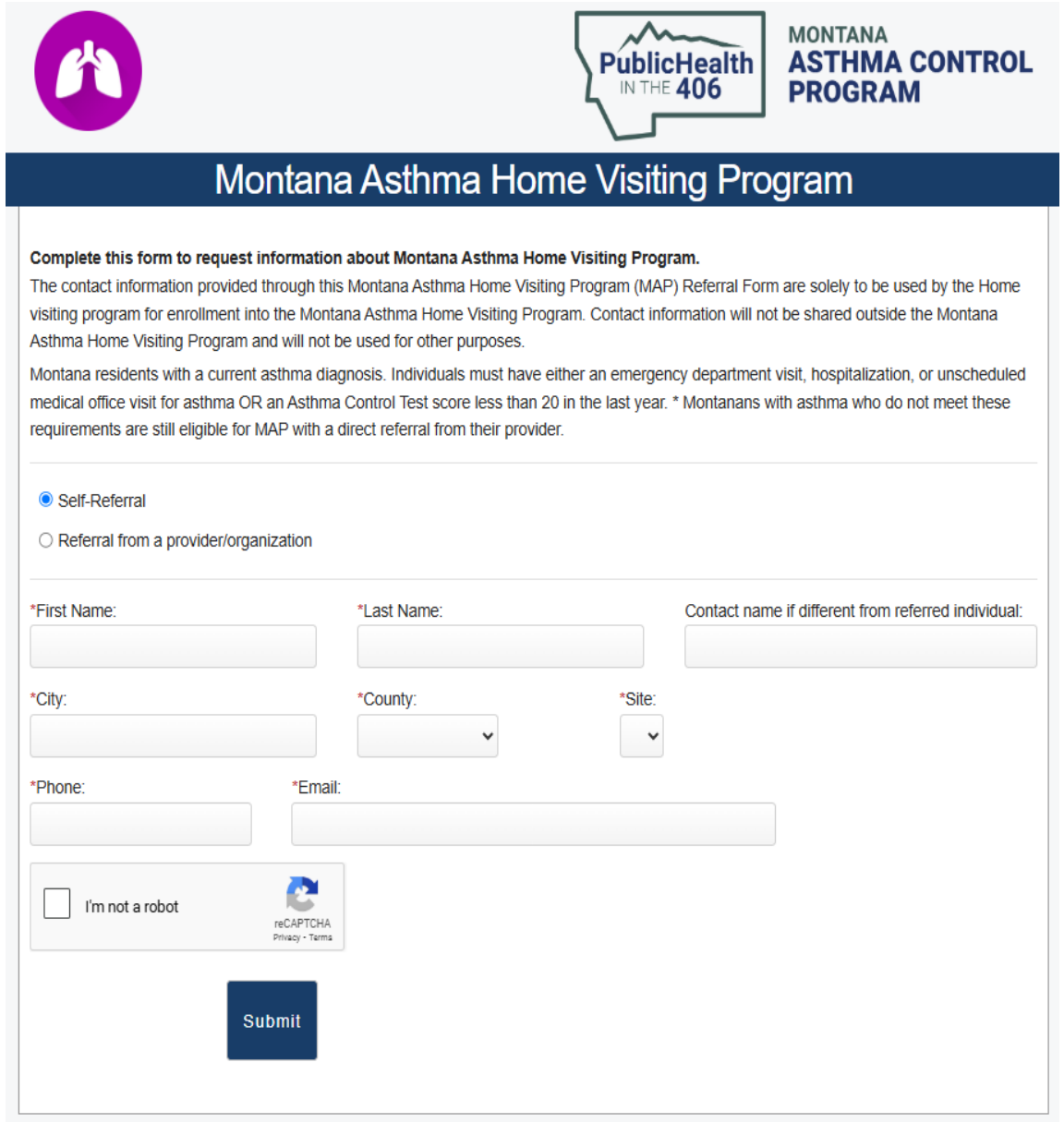


DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

Cost Savings Among Medicaid Members

	Self-Reported Number in Last 6 Months			Estimated Reported Costs and Savings in 12 months		
Asthma-related healthcare usage	**Baseline Visit**	**12-month exit visit**		**Baseline**	**1 year**	**Difference**
	# Visits	# Visits	% Change			
Routine checks in last year	144	135	--			
ED visits in last 6 months	201	24	- 88%	$98,000	$16,300	$81,700
Urgent care in last 6 months	148	24	- 84%	$22,100	$4,200	$17,900
Hospitalizations in last 6 months	19	4	- 78%	$54,600	$26,400	$28,200
Total				$174,700	$46,900	$127,800

Information based on claims data for 387 Medicaid Members enrolled in MAP from 2011 to 2021



MONTANA ASTHMA CONTROL PROGRAM

PublicHealth IN THE 406

Montana Asthma Home Visiting Program

Complete this form to request information about Montana Asthma Home Visiting Program.

The contact information provided through this Montana Asthma Home Visiting Program (MAP) Referral Form are solely to be used by the Home visiting program for enrollment into the Montana Asthma Home Visiting Program. Contact information will not be shared outside the Montana Asthma Home Visiting Program and will not be used for other purposes.

Montana residents with a current asthma diagnosis. Individuals must have either an emergency department visit, hospitalization, or unscheduled medical office visit for asthma OR an Asthma Control Test score less than 20 in the last year. * Montanans with asthma who do not meet these requirements are still eligible for MAP with a direct referral from their provider.

- (●) Self-Referral
- ( ) Referral from a provider/organization

*First Name: | *Last Name: | Contact name if different from referred individual:

*City: | *County: | *Site:

*Phone: | *Email:

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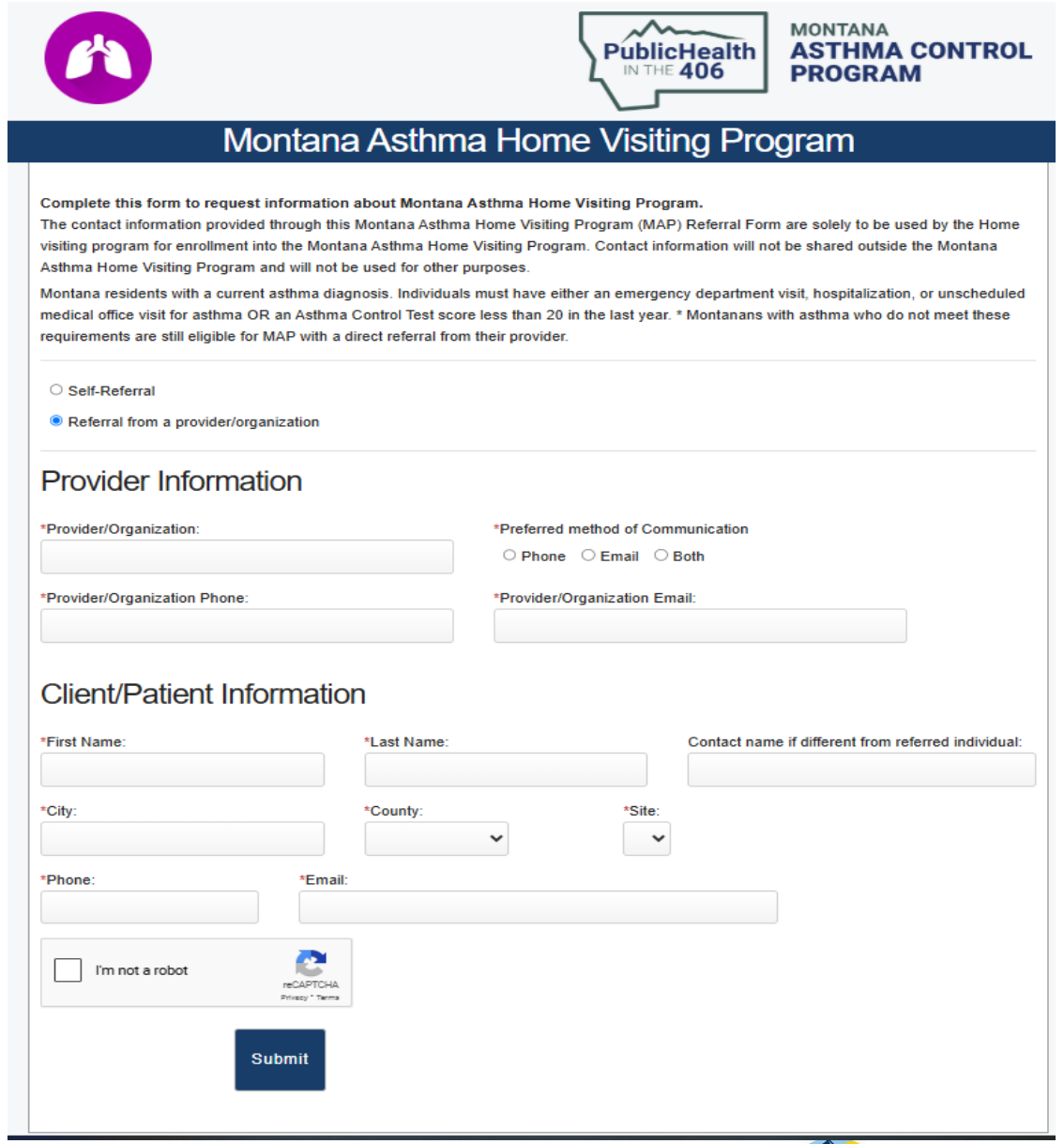
Submit



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- ( ) Self-Referral
- (●) Referral from a provider/organization

Provider Information

*Provider/Organization: | *Preferred method of Communication: ( ) Phone ( ) Email ( ) Both

*Provider/Organization Phone: | *Provider/Organization Email:

Client/Patient Information

*First Name: | *Last Name: | Contact name if different from referred individual:

*City: | *County: | *Site:

*Phone: | *Email:

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Submit

Environmental Focus
Wildfire Smoke and Air Quality

DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

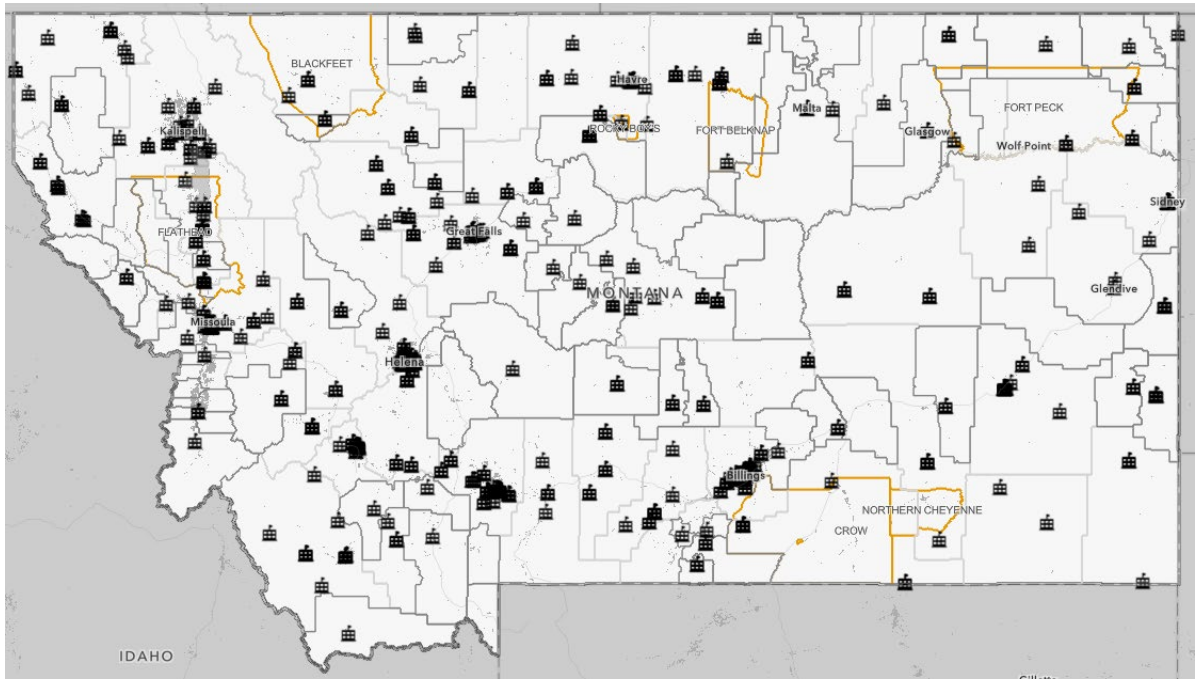
School Administrative Rules

Highlights of Updated ARMS

- Schools must develop and implement approved integrated pest management programs.
- Schools must reference Outdoor Air Quality and Activity Guidelines developed by DPHHS, DEQ, and OPI when determining to delay or cancel school-sponsored events during times of poor local air quality.
- Schools must have a written protocol for minimizing the infiltration of outdoor air into school buildings to the best of their ability during poor outdoor air quality conditions.
- Air filters in school HVAC must meet minimum industry efficiency standards.
- Schools must perform annual indoor air quality inspections including an inspection of the school HVAC system, if applicable.

Air Cleaners in Schools

MACP coordinated the distribution of over 10,000 HEPA Air Cleaners to schools with support from federal COVID-19 School Reopening Funds.



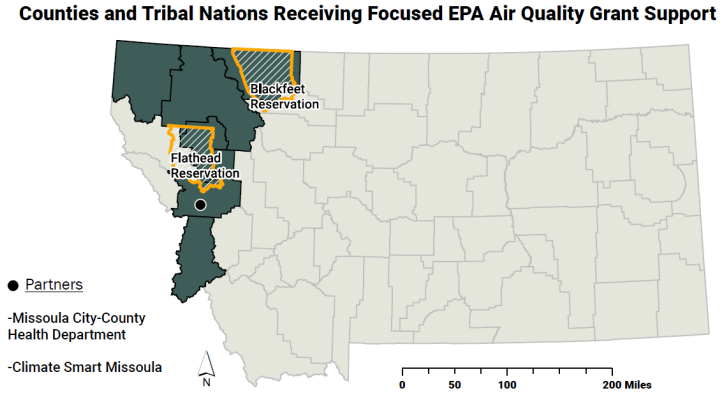
Supporting clean air among priority populations in Western Montana through clear messaging, training, and public spaces.

Strategy 1: Develop communication to outreach to the public, including smoke readiness planning

- Develop and disseminate communication tools tailored to different populations
- Educate public on home air filter options
- Encourage and support coordination and participation in a smoke readiness awareness week

Strategy 2: Technical training

- Provide training opportunities to building and HVAC managers in ASHRAE guidance and other indoor air quality topics
- Create and provide educational materials for building managers on ventilation and air quality

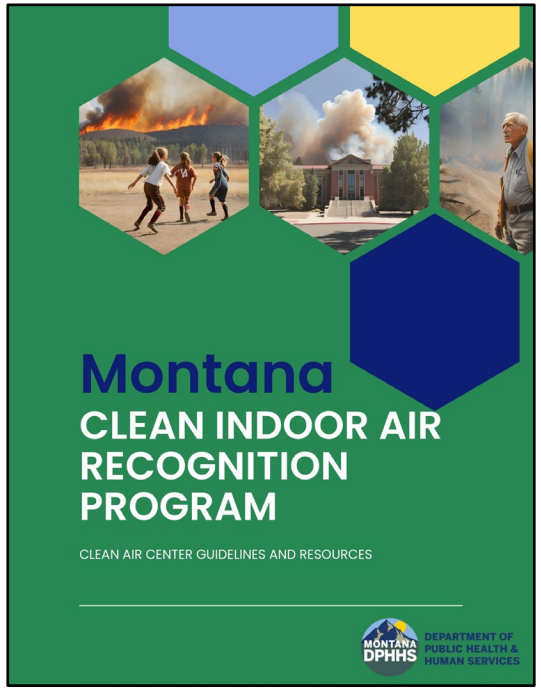


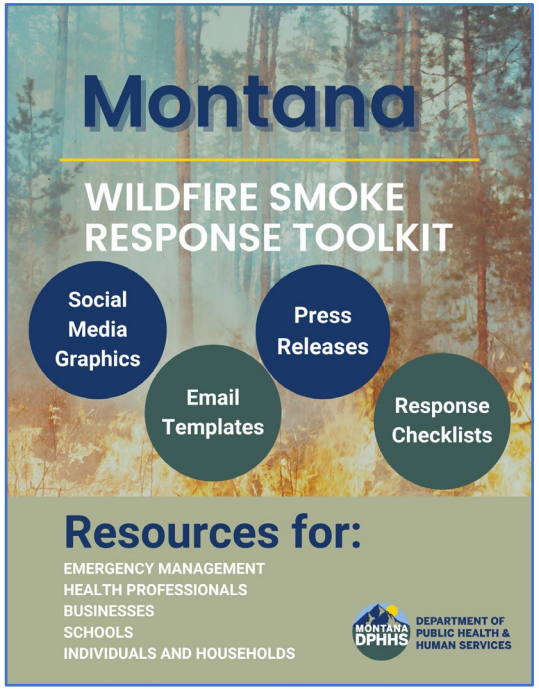
Strategy 3: Clean air recognition program, including the deployment of portable air cleaners, indoor and outdoor air quality monitoring, and preparation of community cleaner air spaces

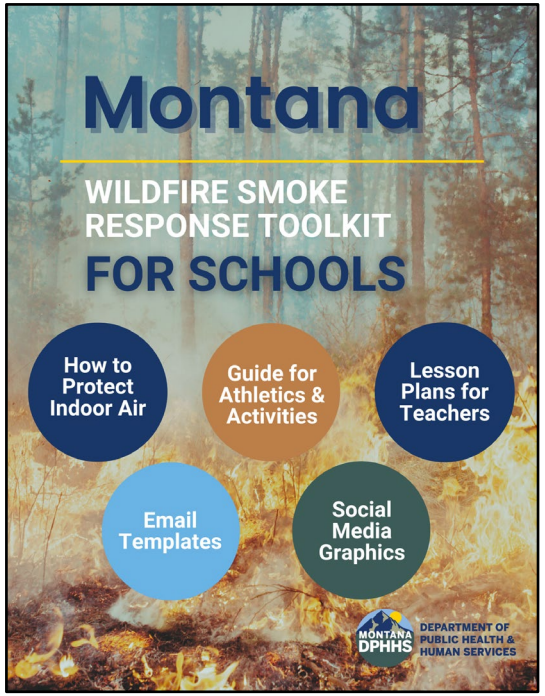
- Develop a cleaner air center recognition program that is replicable and scalable
- Identify six buildings per year to participate and commit to being a public space with cleaner air
- Deploy air quality monitors and air cleaners at these buildings

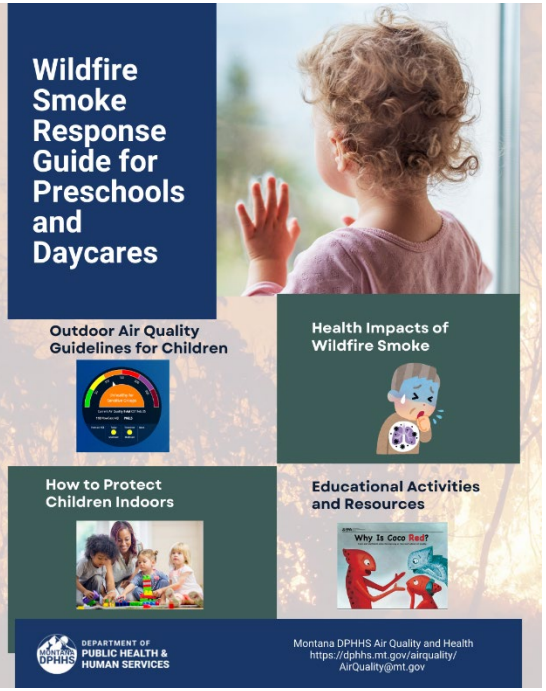
Communication Tools and Education

Toolkits Developed









In the Toolkits

MONTANA
WILDFIRE SMOKE MESSAGING GUIDE

A Resource for Public Health Officials

MONTANA DPHHS

PublicHealth IN THE 406

Community Education and Resources

DYI Box Fan Filter Demonstrations

Wildfire Smoke Preparedness Week

Outdoor/Migrant Worker Education

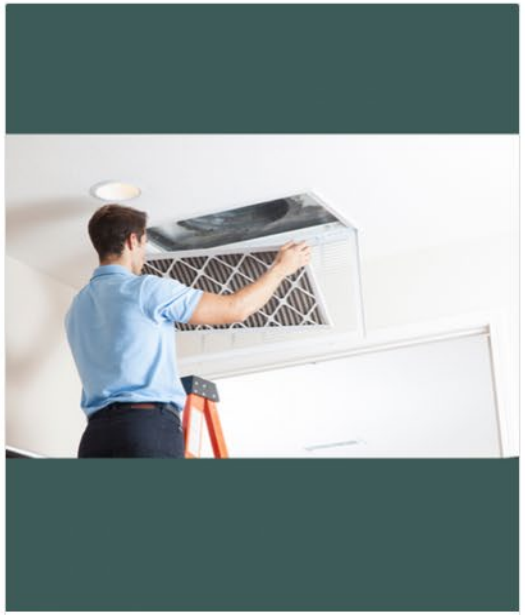
AirQuality.MT.gov

Air Quality

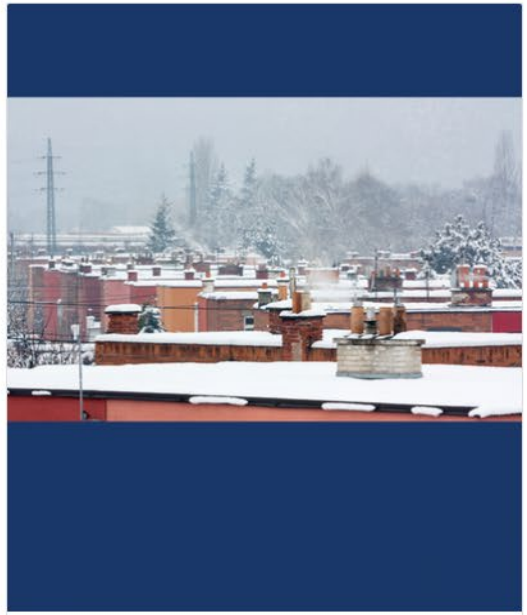
Montana is the third least populated state in the U.S., yet it ranks only fourteenth for highest air quality (U.S. EPA). This is largely due to the severe impacts of summer wildfire smoke and winter inversions that trap air pollutants from wood burning stoves, vehicles and other pollution sources in our western valleys.

Montana residents can take steps to mitigate the effect of poor air quality on their health and daily routines. These steps begin with talking to their health care provider about their health risk. In addition, they must address their behaviors around both indoor and outdoor air, since both settings provide potential threats and opportunities to reduce the impact of lower air quality.

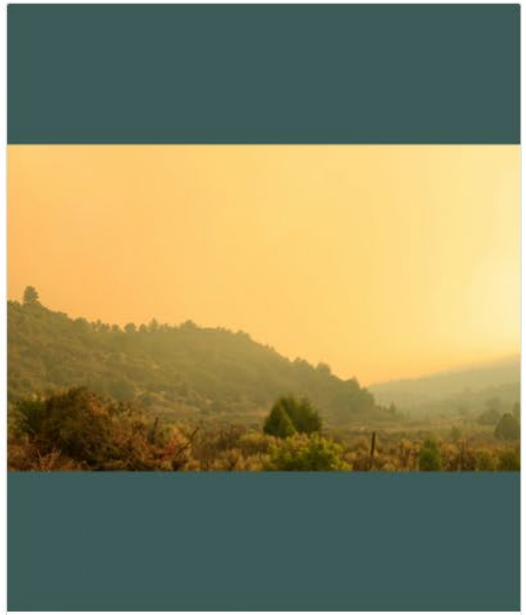
PLEASE NOTE: The Montana Department of Health and Human Services (DPHHS) provides valuable health information regarding air quality to help you stay informed and protect your health. However, DPHHS does not regulate air quality issues. If you need to file a complaint or report an air quality concern, please visit the Montana Department of Environmental Quality (DEQ) Regulation Department. The best way to report a complaint is to contact DEQ Enforcement at 406-444-0379 or DEQ or file an online complaint submission at https://deq.mt.gov/about/reportpollution.



Indoor Air



Outdoor Air



Smoke from Fires

Collapse Menu

Contact Us

Public Health and Safety Division

1400 Broadway, PO Box 202951, Helena, MT 59601

Email Us

4064445946

Air Quality Links

Indoor Air

Outdoor Air

Smoke from Fires

Chronic Disease Prevention & Health Promotion

Bureau Programs

Other Topics

PublicHealth IN THE 406

MONTANA.GOV
OFFICIAL STATE WEBSITE

SERVICES AGENCIES LOGIN Search MT.gov Sites

MONTANA STATE LIBRARY
A GREATER STATE OF KNOWLEDGE

ABOUT THE LIBRARY ▾ DIGITAL LIBRARY ▾ SERVICES TO LIBRARIES ▾ TALKING BOOKS

Virtual Trunks

A virtual trunk is a digital container full of plug and play programming with instructions, printable activity sheets, supporting documents and more that can help your library put together a great event.


History Portal Lego Challenge


Virtual Bat Trunk


History Portal Programming


Health Literacy Trunk


Media Literacy Trunk


Smoke Event Safety Trunk

Civic Engagement for Teens


More trunks coming soon

MONTANA STATE LIBRARY
A GREATER STATE OF KNOWLEDGE

ABOUT THE LIBRARY ▾ DIGITAL LIBRARY ▾ SERVICES TO LIBRARIES ▾ TALKING BOOKS

Wildfire and Smoke Event Trunk


Health Impacts

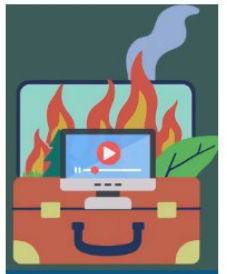

Lessons and Activities


Monitoring Outdoor Air


Protecting indoor Air

Social Media Tools

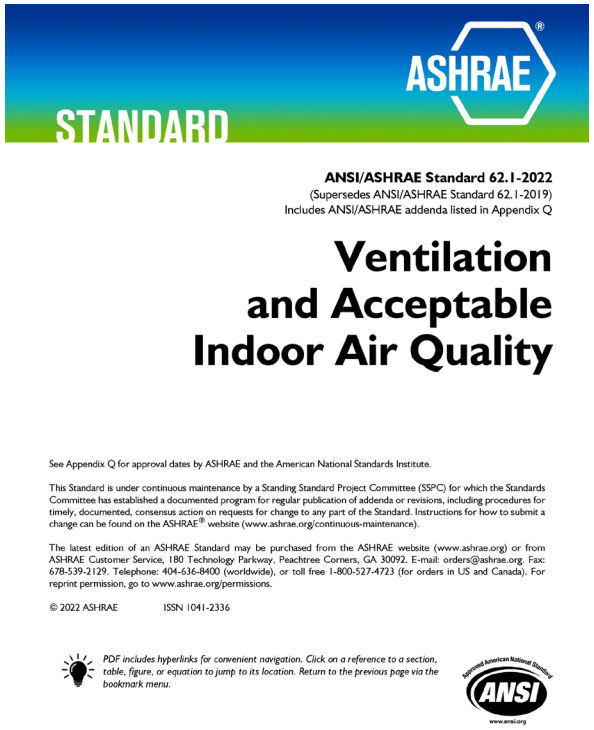

Translated Materials


Videos and Presentations

MONTANA DPHHS
DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

ASHRAE Guideline 44 Technical Training

ASHRAE GUIDELINES



STANDARD

ASHRAE

ANSI/ASHRAE Standard 62.1-2022
(Supersedes ANSI/ASHRAE Standard 62.1-2019)
Includes ANSI/ASHRAE addenda listed in Appendix Q

Ventilation and Acceptable Indoor Air Quality

See Appendix Q for approval dates by ASHRAE and the American National Standards Institute.

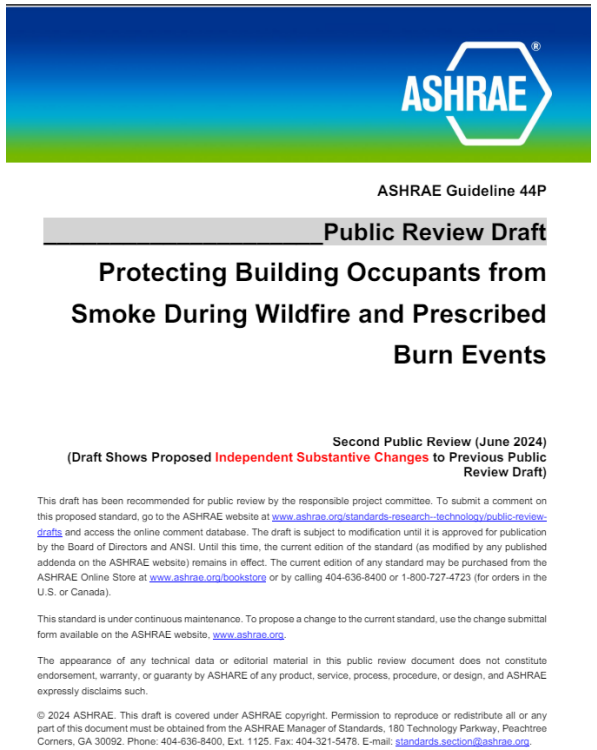
This Standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the Standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

The latest edition of an ASHRAE Standard may be purchased from the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 180 Technology Parkway, Peachtree Corners, GA 30092. E-mail: orders@ashrae.org. Fax: 678-539-2129. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

 ISSN 1041-2336

PDF includes hyperlinks for convenient navigation. Click on a reference to a section, table, figure, or equation to jump to its location. Return to the previous page via the bookmark menu.

ANSI



ASHRAE

ASHRAE Guideline 44P

Public Review Draft

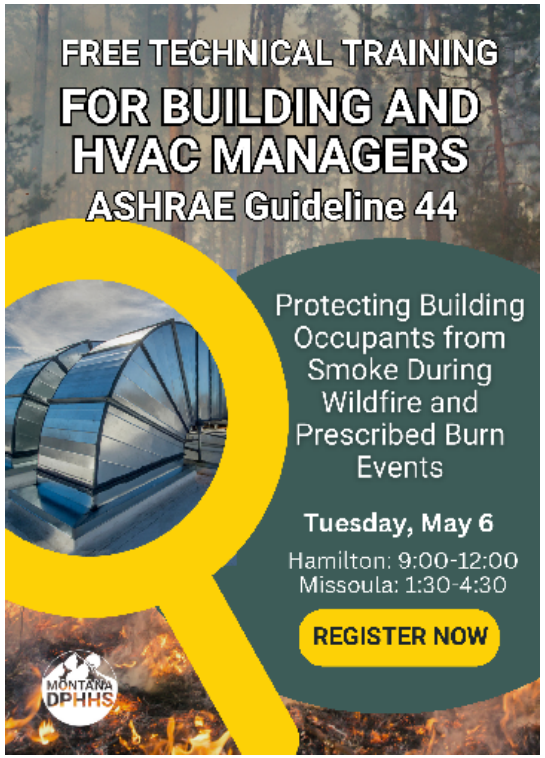
Protecting Building Occupants from Smoke During Wildfire and Prescribed Burn Events

Second Public Review (June 2024)
(Draft Shows Proposed Independent Substantive Changes to Previous Public Review Draft)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHARE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.



Clean Air Recognition Program

Our Objective: Empower public buildings in target communities to serve as clean air centers for citizens during wildfire smoke events.

What DPHHS Provides:

- Smoke readiness planning guidance and resources
- HEPA air cleaner(s)/other support tools
- Indoor air quality monitor
- $1,500 stipend for incurred expenses
- HVAC system training for building manager/HVAC contractors

Partner Commitment:

- Adopt policies and protocols for protecting the building from wildfire smoke and improving indoor air quality conditions during smoke events
- Develop/adopt a building smoke readiness plan
- Meet regularly with DPHHS and other air quality partners to review actions taken and identify opportunities for improvement
- Share IAQ monitoring data with DPHHS
- Publicize Clean Indoor Air Center role in the community (A 24-hour center is not necessary to be eligible for this opportunity.)

Clean Air Recognition Program

Indoor and Outdoor Air Quality
Darby Library

This "Purple Air" sensor measures **indoor Air Quality**, specifically fine particular matter: PM 2.5. It's connected to the internet!

Click this QR code to view the **Purple Air map** and air quality level inside this library (it's the circle with a border!).

Current Indoor Air:

Wildfires and wood smoke contain many pollutants. We're most concerned with fine particulate matter PM2.5. These tiny particles can burrow deep into our lungs and even pass into our bloodstream, and they impact our health in multiple ways. Please see our brochure or **montanawildfiresmoke.org** for more information about health risks and what you can do in your home to prepare and stay healthy.

Current Outdoor Air

Darby also has an **outdoor Air Quality** sensor, and you can see the current air quality at **AirNow.gov**. Click this QR code.

Air Quality Activity Guidelines (AQI) provide the level of air quality and recommended actions

AQI		What should I do?
0-50		Good: You can breathe safe
51-100		Moderate: Some risk for those who are sensitive to air pollution
101-150		Unhealthy for Sensitive Groups: These folks should limit time outside and avoid strenuous outdoor activity
151-200		Unhealthy: Everyone should reduce exposure. Limit time and activity outside and take steps for clean indoor air.
201-500		Hazardous: Stay inside and filter indoor air. Go elsewhere for cleaner air if needed.

Climate Smart Missoula

DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

WILDFIRE SMOKE SEASON CHECKLIST

BEFORE SMOKE EVENT			
Task	**Assigned To**	**Completed**	**Notes**
Check supplies • HEPA Air Cleaner is operable • Extra HEPA filters available			
Confirm Air Monitor is operating			
Confirm staff is familiar with Clean Air Center protocols, monitor & materials			
Publicize shelter availability incl. hours of operation			
Clean HVAC system			
Determine clean air shelter/room capacity			
Solicit resources from community partners, if applicable			
DURING SMOKE EVENT			
Switch HVAC System from "normal" mode to "smoke mode"			
Display Shelter Availability Sign on main & community room doors			
Display & update Current Air Quality sheet			
Display Keep Door Closed signs on all doors			
Make Daily Monitoring Checklist available to staff & complete daily			
Monitor IAQ with PurpleAir indoor sensor			
Check HVAC & HEPA filters every 3-7 days, depending on severity and length of smoke event			
Maintain indoor temp below 80 °			
AFTER SMOKE EVENT			
Wet mop/dust surfaces			
Monitor IAQ & continue to use HEPA if needed			
Change filters in HEPA and/or HVAC if needed			
Thank community partners for resources, if applicable			
Record lessons learned if applicable			

Clean Indoor Air Center

Capacity:
Hours:

Entity Logo Here

DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES

Lessons Learned

People need something to do

Every building/community is different

Don’t box yourself in when looking for partners

EPA Indoor Air Quality

Panel Discussion and Question and Answer Session

Introducing Our Panelists

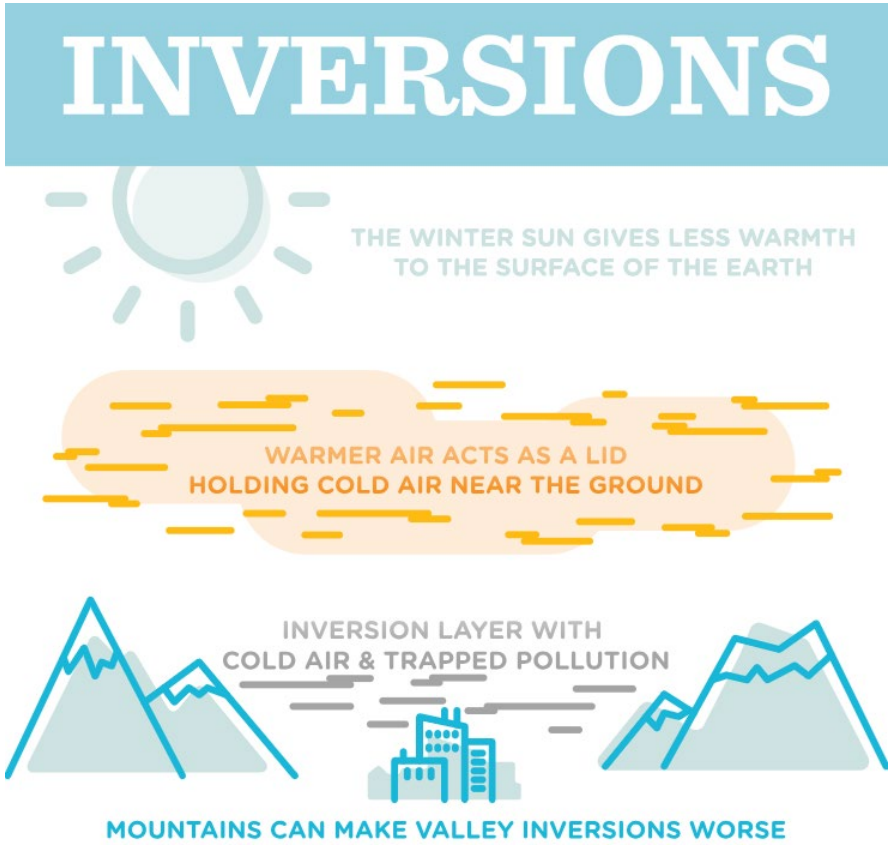
Facilitated Expert Panel Discussion

Kellie Baxter
Utah Department of Health and Human Services
Asthma Program

BJ Biskupiak
Montana Department of Public Health & Human Services
Asthma Control Program

Brendon Haggerty
Multnomah County Health Department
Healthy Homes and Communities

Utah Air Quality Partnerships



Source: deq.utah.gov/air-quality/inversions

Air quality social media toolkit

Utah Department of Health and Human Services (DHHS)

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY

Beehive Emission Reduction Plan

THE UNIVERSITY OF UTAH

Show UCAIR
UTAH CLEAN AIR PARTNERSHIP

UHEART
Utah Health and Environment Action and Resilience Team

Utah Recess Guidance

Recess Guidance for Schools:

When to schedule indoor recess based on air quality.

Particulate Matter (PM) 2.5 & Air Quality Index (AQI)* Levels	Recommendations for Recess
AQI 300 / PM2.5 (µg/m³) 250.0	PM2.5 above 55.5 **All students stay indoors.**
150 / 55.4	PM2.5 35.5 - 55.4 **Students with respiratory symptoms** & sensitive students*** stay indoors.**
100 / 35.4	PM2.5 below 35.4 **All students outdoors.**

Check PM2.5 levels at air.utah.gov; click on "Current."

Indoor Recess Activity

The school makes the final decision regarding when and where to hold recess. We encourage schools to consider active options for indoor recess. See examples at health.utah.gov/asthma.

Email alerts for schools

The forecast is **ORANGE** today.	Sensitive students and students with respiratory symptoms stay indoors.
The forecast is **RED** today.	All students stay indoors.

Introducing Our Panelists

Facilitated Expert Panel Discussion

Kellie Baxter
Utah Department of Health and Human Services
Asthma Program

BJ Biskupiak
Montana Department of Public Health & Human Services
Asthma Control Program

Brendon Haggerty
Multnomah County Health Department
Healthy Homes and Communities

EPA Asthma and Wildfire Resources

Asthma

Scan the QR Codes below to access each EPA Asthma resource, or scan the code to the right to explore EPA's Asthma website.

Asthma Triggers Infographics

This collection of infographics provides a brief overview of different asthma triggers and ways to reduce exposure.

Strategies for Addressing Asthma in Homes

Using this home assessment tool, a trained home visitor can help find common asthma triggers in homes and discuss ways to reduce and remove triggers to make homes healthier.

Help Your Child Gain Control Over Asthma

This brochure offers tips on how to manage asthma and follow simple steps to minimize exposure to asthma triggers found indoors and out.

Dusty the Goldfish and His Asthma Triggers Funbook

This educational activity book helps children learn more about asthma triggers.

EPA Asthma and Wildfire Resources

Wildfires and Indoor Air Quality

Scan the QR Codes below to access each resource, or scan the code to the right to explore EPA's Wildfires and Indoor Air Quality webpage, which is available in nine languages.

DIY Air Cleaner Infographics

If portable air cleaners are not available or affordable, you may choose to use a do-it-yourself (DIY) air cleaner. Thes infographics provide directions for how to create different types of DIY air cleaners.

For more information about protecting indoor air quality during emergencies and disasters, visit **EPA's Emergencies and Indoor Air Quality webpage** by scanning the QR code to the right.

'How to Create a Clean Room at Home' Video

Spending time in a clean room at home can help reduce your exposure to smoke while staying indoors. This video will show you how to create a clean room to reduce your family's exposure to wildfire smoke while indoors.

Wildfires and Indoor Air Quality in Schools and Commercial Buildings Webpage

Smoke events can last for days and weeks, which is why it is important for building owners and managers to have information on best practices for reducing exposure to smoke that may enter schools, commercial buildings, or multi-unit housing.

Wildfire Guide Factsheets

This series of factsheets from EPA's AirNow program will help you prepare for wildfire season and take steps to reduce your exposure to smoke and ash.


WILDFIRE SMOKE FACTSHEET

Prepare for Fire Season

Before a Wildfire

Thank You for Attending!