An Overview of Fort Collins Programs to Address Smoke Impacts

Dr. Megan DeMasters, Specialist   City of Fort Collins Air Quality Program
Fort Collins, Colorado

➢ Sits against the Foothills of the Rocky Mountains
➢ Population of ~170,000
➢ Proud home of Colorado State University
Sustainability and Air Quality Programs

- Outdoor Air
  - AQ Awareness (e.g., AQI, ozone, particles)
  - Ozone causing sources (e.g., vehicles, lawnmowers, oil and gas)
  - Environmental Regulation and Compliance
  - Air Quality Monitoring
  - Climate Adaptation (e.g., wildfire impacts)

- Indoor Air
  - Healthy Homes Program
  - Radon
Why Focus on Smoke Impacts?

2012 High Park Fire

Understanding how to respond to disruptions
Unique Aspects of Smoke

- Smoke travels
- Smoke can vary throughout the day
- Small-mid-large events

<table>
<thead>
<tr>
<th>Air Quality Index - Particulate Matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>301 – 500</td>
</tr>
<tr>
<td>201 – 300</td>
</tr>
<tr>
<td>151 – 200</td>
</tr>
<tr>
<td>101 – 150</td>
</tr>
<tr>
<td>51 – 100</td>
</tr>
<tr>
<td>0 – 50</td>
</tr>
</tbody>
</table>
Becoming a Smoke-Ready Community

A community in which public buildings have filtration for smoke; Community members understand the health risks associated with smoke exposure; Have access to tools to protect themselves; Resources are on hand to help the most at-risk and under-served members of the community.
Ongoing
• Collaborate with partners
• Wildfire Smoke Campaign
• Equity considerations

Near-Term
• Connect with Emergency Response plans
• Community-scale monitoring

Long-term
• Building upgrades
• Resources for most at-risk and underserved
PORTABLE AIR CLEANERS

WHAT ARE PORTABLE AIR CLEANERS?

Portable air cleaners (PACs) filter out particle pollution from indoor pollution sources and help maintain a clean air environment when outdoor air quality is compromised (such as when there is smoke from wildfires).

WHY BUY ONE?

Poor air quality, both indoor and outdoor, can negatively impact your health:

- Indoor air quality can be 5x worse than outdoor air quality
- Activities done inside the home (cooking, cleaning, smoking, burning candles, vaping) can worsen indoor air quality
- Smoke from wildfires can travel into your home and make indoor air unhealthy

WHEN CHOOSING A PAC, LOOK FOR A MACHINE WITH:

1. **HIGH CLEAN AIR DELIVERY RATE (CADR)**
   The higher the CADR, the more effective the machine is at removing smoke-size particles.
   Look for a machine that has a CADR 100-200cm

2. **AHAM VERIFIED**
   The AHAM seal (usually on the back or side of the PAC box) lists 3 CADR numbers: one for tobacco smoke, one for pollen and one for dust. The higher the numbers, the better the unit filters the air.

3. **HEPA FILTER**
   Follow the AHAM’s 2/3 Rule: A PAC should have a tobacco smoke CADR at least 2/3 of the area of the room you will use it in. A 120 sq ft room requires a PAC with a tobacco smoke CADR of at least 80.

AVOID MACHINES THAT ARE IONIZING OR OZONE GENERATING

TIPS FOR USING YOUR PAC

- Machine is only effective when the fan is running continuously
- Clean regularly/change filters regularly
- Right-size to the room

PACs will have a recommendation for the size of the room it should be placed in—make sure that PAC is appropriate for the size of the room it is in to ensure maximum effectiveness.
Goal: Develop a Particle Monitoring Plan

- Increased representation of spatial and temporal variability of smoke
- Promote public awareness
- Inform responders
- Citizen Science based
- Low cost, durable, low maintenance monitors
- Sustainable funding

Fcgov.com/AQdata
Megan DeMasters
mdemasters@fcgov.com