Wildfire Smoke: A Guide for Public Health Officials
Planned Updates

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Overview

• Wildfire Smoke: A Guide for Public Health Officials
• Sections and key revisions
• Authors
• Schedule and review
• Stakeholder input
Wildfire Smoke: A Guide for Public Health Officials

- Developed in 2001
  - Response to 1999 fires on Hoopa reservation
  - Meetings in 2000 (CA OEHHA) and 2001 (University of Washington) led to development
  - Very little health or air quality information upon which to base recommendations
  - Developed by EPA, agencies in California and Washington; no agency took ownership. Widely used by state/local agencies

- Revised in 2008
  - Better information about PM health effects and exposure information (e.g., more continuous monitoring data)
  - Same partners made revisions, still widely used

- Revising it now
  - Stronger evidence base
  - Federal agencies making revisions with input from state and local partners
  - Two-step process

Sections of the Guide

- Composition and characteristics of wildfire smoke
- Health effects of smoke and at-risk populations
- Strategies to reduce smoke exposure
  - Indoors
  - Outdoors
- Calculating PM levels
- NowCast (new section)
- Visibility
- Recommendations for public health actions - based on real-time AQI (NowCast) and forecasts

Current appendices: protecting indoor workers from smoke; respirator use; clean-up; cleaner air shelters; smoke alert examples
Updating the Wildfire Guide

• Revisions to guide will be led by federal agencies
  • Partners include CDC, EPA, USFS and other federal, state and local agencies
  • Target completion date is May, prior to 2016 fire season

• Revised guide will reflect recent advances
  • Stronger evidence base, including new PM/fire-related research and recent peer-reviewed assessments from British Columbia CDC
  • New thinking informs use of air quality “snapshots” such as instantaneous air quality readings or visual ranges
  • 2014 deployment of NowCast - responsive hourly AQI metric for PM$_{2.5}$
  • Fires: Current Conditions webpage - linking information from federal, state and local agencies

• Revised guide will reflect concerted effort by federal agencies to provide integrated and consistent messaging for use by state, tribal and local agencies

• CDC will disseminate information to state and local health departments
Stronger Evidence Base

- New PM and fire-related research
- British Columbia Centre for Disease Control peer-reviewed documents
  - Guidance for BC Public Health Decision Makers During Wildfire Smoke Events
  - Evidence reviews about: clean air shelters; reducing time outdoors, and smoke and public health risk
  - [http://www.bccdc.ca/health-info/health-your-environment/air-quality](http://www.bccdc.ca/health-info/health-your-environment/air-quality)
Changes to Table with Recommended Actions for Public Health Officials

<table>
<thead>
<tr>
<th>Category (AQI Values)</th>
<th>PM2.5 or PM10 Levels (μg/m³)</th>
<th>24 hr avg</th>
<th>Recommended Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (0 to 50)</td>
<td>0 – 12</td>
<td>• If smoke event forecast, implement communication plan</td>
<td></td>
</tr>
<tr>
<td>Moderate (51 to 100)</td>
<td>12.1 – 35.4</td>
<td>• Issue public service announcements (PSAs) advising public about health effects and symptoms and ways to reduce exposure • Distribute information about exposure avoidance • Issue public service announcements (PSAs) advising public about health effects and symptoms and ways to reduce exposure</td>
<td></td>
</tr>
<tr>
<td>Unhealthy for Sensitive Groups (101 to 150)</td>
<td>35.5 – 55.4</td>
<td>• If smoke event projected to be prolonged, evaluate and notify possible sites for cleaner air shelters • If smoke event projected to be prolonged, prepare evacuation plans</td>
<td></td>
</tr>
<tr>
<td>Unhealthy (151 to 200)</td>
<td>55.5 – 150.4</td>
<td>• Consider “Smoke Day” for schools (i.e., no school that day), possibly based on school environment and travel considerations • Consider canceling public events, based on public health and travel considerations</td>
<td></td>
</tr>
<tr>
<td>Very Unhealthy (201 to 300)</td>
<td>150.5 – 250.4</td>
<td>• Consider closing some or all schools (Newer schools with a central air cleaning filter may be more protective than older, leakier homes) • Cancel outdoor events (e.g., concerts and competitive sports)</td>
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</tr>
<tr>
<td>Hazardous (&gt; 300)</td>
<td>&gt; 250.5-500</td>
<td>• Close schools • Cancel outdoor events (e.g., concerts and competitive sports) • Consider closing workplaces not essential to public health • If PM level is projected to remain high for a prolonged time, consider evacuation of sensitive populations</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Air Quality Index categories (AQI) with actions recommended for public health protection during a wildfire smoke incident.*

*Not all states agree entirely with the values and/or recommendations given in this table. Check with your state or county health department before using or distributing.

Section on visibility guidelines
Authors

- EPA
  - Office of Air and Radiation, Office of Research and Development, Indoor Environments Division
- CDC
  - Air Pollution and Respiratory Health Branch
- USFS - air quality and visibility
- Pediatric Environmental Health Specialty Units (PEHSU; http://www.pehsu.net/)
  - Update the sections on children and pregnant women and create factsheet
Schedule and Review

- Two-step process
  - Make initial revisions spring 2016
    - Draft Revised Guide for 2016 fire season
  - Get input before and after fire season
  - Make final revisions winter 2016-2017
    - Final for 2017 fire season
- Opportunity for input from ASTHO and ECOS
- Reach out to other partners/stakeholders

<table>
<thead>
<tr>
<th>Schedule:</th>
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<tbody>
<tr>
<td>Provide ASTHO/ECOS and stakeholders with initial revisions to guide</td>
<td>Early April 2016</td>
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<tr>
<td>ASTHO/ECOS call with States to provide input on initial revisions</td>
<td>Late April 2016</td>
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<tr>
<td>State comments provided to EPA as written comments</td>
<td>Early May 2016</td>
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<tr>
<td>First Draft Revised Guide</td>
<td>End of May 2016</td>
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<tr>
<td>Deliver Draft Revised Guide for use during 2016 fire season</td>
<td>Early June, July, August 2016</td>
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<tr>
<td>After use of the Draft Revised Guide during the 2016 wildfire season partners provide comments to EPA on its utility</td>
<td>Early September 2016</td>
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<tr>
<td>EPA summarizes comments and presents experience to ASTHO and ECOS at their national meetings</td>
<td>Late September 2016</td>
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<tr>
<td>EPA works to finalize the document based on State input</td>
<td>Winter - 2016</td>
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<tr>
<td>Work with partners to develop communications and outreach strategy for Final Guide</td>
<td>Winter - 2016</td>
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<tr>
<td>Release Final Guide</td>
<td>For 2017 fire season</td>
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Stakeholder Input

• ASTHO and ECOS
• Partners: California (OER, CARPA, ARB) Washington, New Mexico, Wyoming, others?
• NACAA?