

# Wildland Fire Air Quality Response 2012 and Beyond:

## Where there's fire, there's smoke

Pete Lahm

Forest Service

Fire and Aviation Management

Washington, D.C.

202-205-1084 // 602-432-2614 cell

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# An Evolving Effort (Program)

- Air Quality Impacts from Wildfire Smoke:
  - Public Health Impacts,
  - Transportation Safety and
  - Fire Personnel Exposure
- One in three households has someone with respiratory issues: child with asthma, COPD, emphysema, etc.
- Address sensitive groups at risk: people with asthma, older adults and those of low income
- Smoke impacts to public are longer with higher levels
- Fatalities still happening from wildland fire smoke on roads (public and first responders)
- No other group knows what the fire will do in terms of: fire spread, growth, intensity, burnouts, fuels, consumption, emissions, weather, duration,...

# Smoke Information and Predictions

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Timely smoke impact information and predictions reduce risk to both fire personnel and the public

- Studies show change in people's behavior and in health outcomes

- If people know what to expect: they plan & react better
- Sensitive individuals will take protective actions when warned (EPA AIRNow)
- People respond when informed of higher risk levels
- Important that health messages be consistent

**Increase public confidence**

**Increase exposure reduction measures**

**Based on best science**



# Interagency **Wildland Fire** Air Quality Response

## ● National Effort

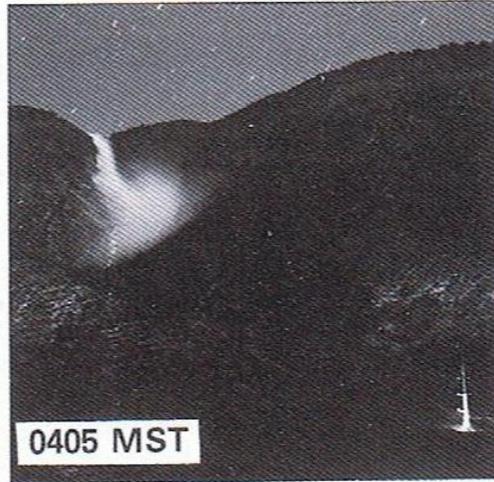
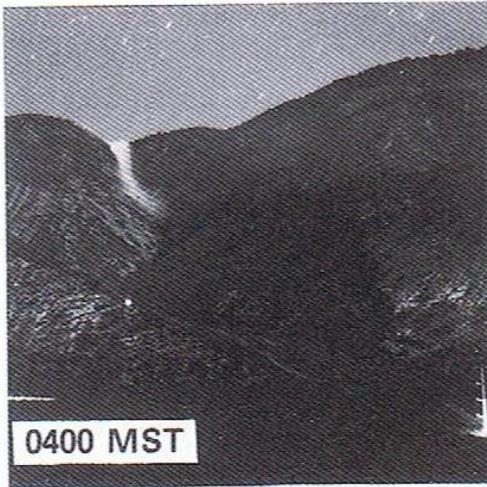
- Cadre of Air Resource Advisors (ARA) Developed
- Range of Skills (ARA 1, 2 & 3) (not 310-1 position)
- FS, BLM, FWS, NPS, Contractor, State Forestry
- Coordinated and Assigned via FS Smoke Lead

## ● Multi-tiered Approach

- Incident Level
- State Level Program Efforts
- Area Command
- Geographic Area Coordination Centers
- Regional Wildfire Decision Support Center

# Transportation Safety: Issues and Opportunities

- **Public Safety –**
  - Assessing possible smoke road interaction
  - Predicting weather conditions for impacts
  - Responding to possible impacts: public safety, state DOT, pilot cars, closures, NWS alerts, PIO, tweets
- **Fire Personnel –**
  - **Ground Transport through smoke impacted areas**
  - **Reporting of conditions and risk**
  - **Safety Briefings**
  - **Routing**



Colorado's Brush Creek Valley with smoke movement down drainage within a "Box Canyon" under an inversion.

Who is being impacted by night time smoke movement?

Base or Spike Camp locations need to be considered.

Photos by J. M. Thorp & M. M. Orgill.

# Helibase / Helispots locations can critically impacted by smoke



Photo by A.  
Farnsworth

# Issues and Opportunities:

## Air Resource Advisors

- **Planning for Wildfire Air Quality Response 2013**
  - Fires of long duration & high spread with heavy fuels = air quality impacts
    - Develop a plan for response- incident, area, region, partners
  - Building credibility with public, partners & stakeholders
  - Responding to wildfire air quality not in training
- **Responding to 2013 Wildfire Air Quality Impacts**
  - Public health, Transportation safety, Personnel exposure
  - Early in the incident was a real challenge in 2011 & 12
  - Not every wildfire needs an AQ response or risk can be addressed internally