

Forest Service Report:

-Wildland Fire Air Quality Response Program

-Ozone NAAQS Revision

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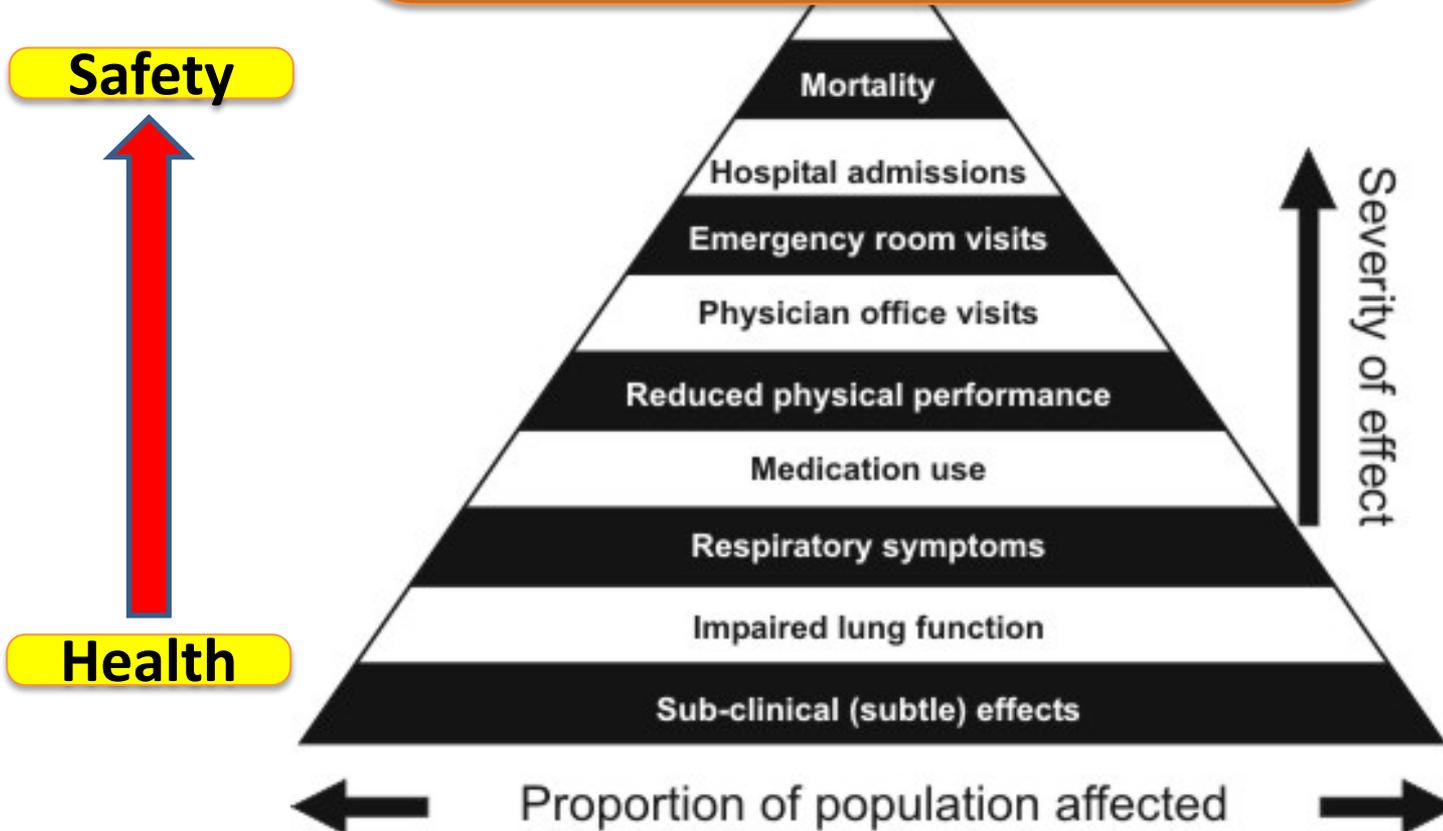
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An Evolving Interagency Program

- One in three households has someone with respiratory issues: child with asthma, COPD, emphysema, etc. 26 million have asthma in US.
- Address sensitive groups at risk: people with asthma, older adults and those of low income. Science: pregnant women, diabetics.
- Public air quality warnings effective and at-risk public responds in kind
- **NO** particulate matter is healthy: Designations & SIPs
- Ozone EPA Science Analysis Effects 60ppb and below
- Medical costs: \$8 to \$80/day/person exposure to wildfire smoke
- Smoke impacts to public are longer at higher levels
- Wildfire Seasons longer and hotter
- Under the Clean Air Act, States obligated to respond and protect the public from high levels of air pollution
- Land managers know more of what the fire will do in terms of: fire spread, growth, intensity, burnouts, fuels, consumption, emissions, weather, duration,...
- Land managers using risk assessment to manage wildfires now.

Transition from public health to public safety impacts



Wildland Fire Air Quality Response Program

Focus for wildland fires through use of Air Resource Advisors:

- 1) Smoke impacts to public health and **safety**
- 2) Transportation safety (roads & aviation for public & personnel)
- 3) Fire personnel smoke exposure (on-fireline, ICP, Base Camp)



Methods – Monitoring, Modeling, Messaging

- **Monitoring** – Deployment, Interpretation and Dissemination
 - National Cache of 20 E-SAMPLERs (NFES 5840)
 - EPA contributing 4 E-BAMs –being retrofitted
 - Data via GOES Satellite linkage
 - Data online real-time @ WRCC, EPA AirNow Tech FY15 Public Wildfire Smoke page on AIRNOW

Wildland Fire Air Quality Response Program

Improving how Air Quality considered on incidents and decisions



- **Modeling**—Provided by PNW AirFire Team
- Operational incident / regional / national forecasting of air quality impacts
 - BlueSky Playground
 - Fine-scale (1 km) NWS Fire Behavior Grids
 - National scale meteorology and climatology
 - Complexity Analysis tool under development
 - Monitoring Analysis Tool

Wildland Fire Air Quality Response Program

- **Messaging** – Conveyed via ARA's
 - Cohesive message (State/District Health & Air Quality Agencies, National Weather Service)
 - Transportation Safety Alerts and Warnings
 - Incident public meetings
 - State Smoke Blogs
 - Cooperation with State Emergency Response Agencies
- **Stakeholder and Partner Collaboration**
 - Planning & communication of fire strategy & tactics translated into smoke impacts and response
 - State Emergency Response Plans for Wildfire Smoke
 - EPA , CDC collaborative efforts



Wildland Fire Air Quality Response Program

● National Effort

- Cadre of Air Resource Advisors (THSP-ARA) Developed
- Two Training Sessions Held – Trainee Program
- Range of Skills in around 40 people
- FS, BLM, FWS, NPS, NRCS, AD-Contractor, EPA?, States: GA, NC, FL
- Coordination/dispatch
- Dispatches: 2011- handful, 2012-13, 2013-25, 2014-24
- Requests: IC, SOPL, SOF1, FS Regions, National Forests, National Parks, State Forestry?
- Assignments: Incident Level, Forest, State Level Program Efforts, Agency Admins. ,Area Command , GACC, Regional Wildfire Decision Support Centers

Ozone NAAQS Revisions

- CASAC Recommendations:
 - Primary – 60, 65, 70, current 75, same form
 - Secondary – 7-13 W126 Method, 1 or 3 year avg.
- Analysis of 2011-2013 monitoring data
- Draft mapping of counties with monitors that may exceed possible ozone primary standards
 - General Conformity - Federal Agencies or funding
- Proposed Standard 12/14 EPA release based on court order
- Final Due 10/15

DRAFT RESULTS

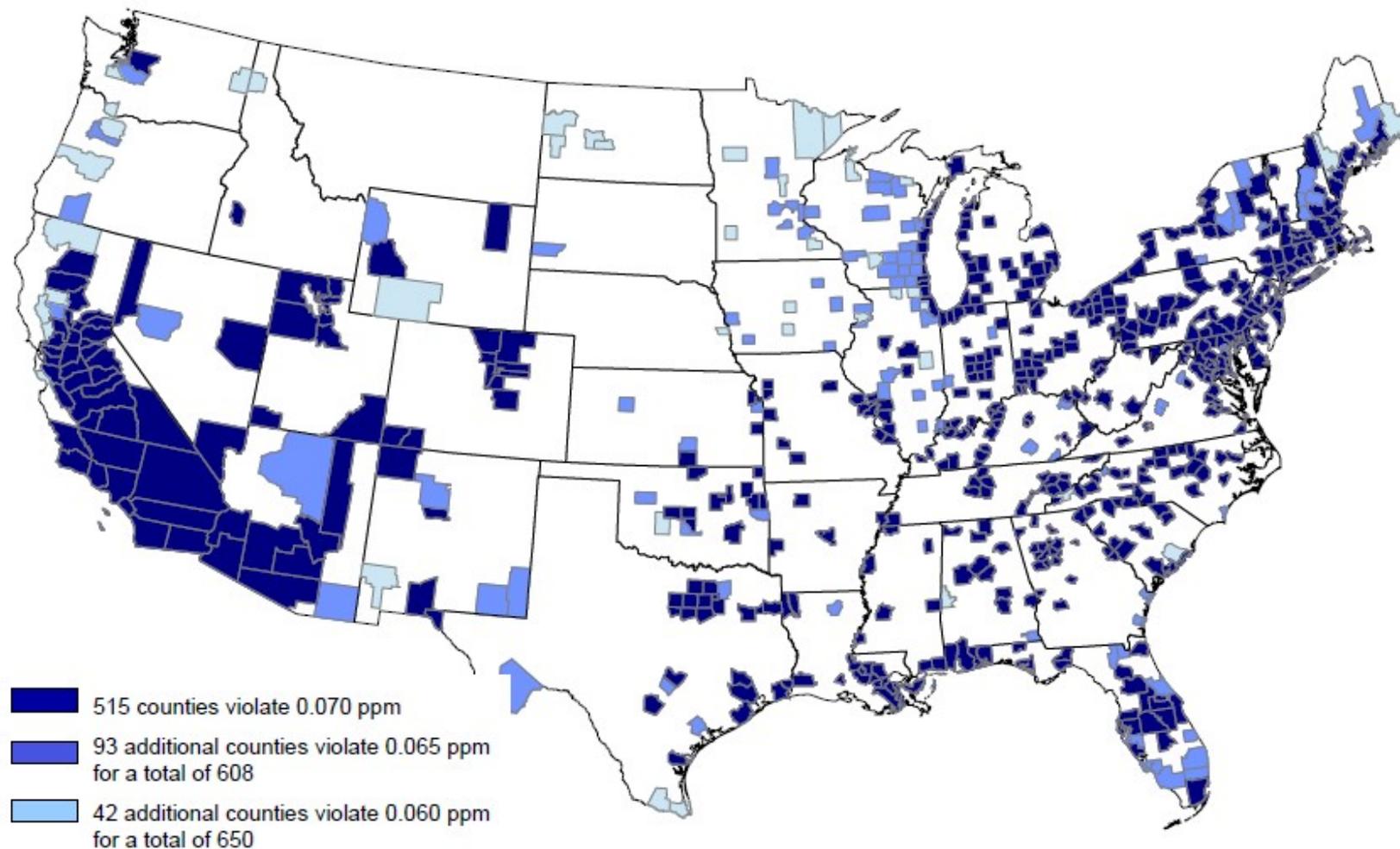
Possible Standards	0.60	0.65	0.70	0.75
Federal Totals	197	171	125	66
Non-Federal Totals	298	237	155	75

**Possible millions of acres in nonattainment
based on potential EPA primary ozone standards
2011-2013 Monitoring Data**

Counties With Monitors Violating Primary 8-hour Ground-level Ozone Standards 0.060 - 0.070 parts per million

(Based on 2006 – 2008 Air Quality Data)

EPA will not designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.



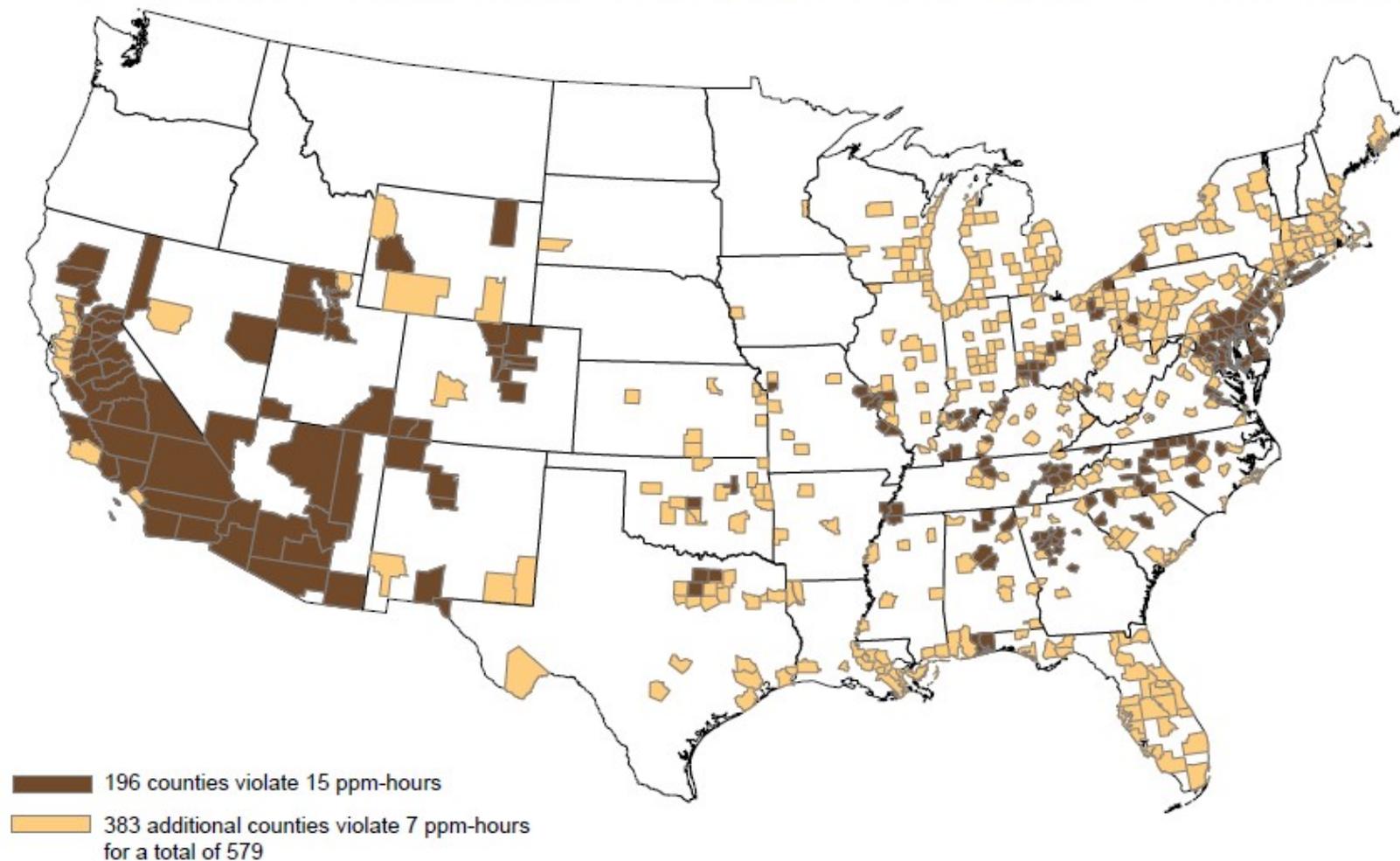
Notes:

1. No monitored counties outside the continental U.S. violate.
2. EPA is proposing to determine compliance with a revised primary ozone standard by rounding the 3-year average to three decimal places.

Counties With Monitors Violating Secondary Seasonal Ground-Level Ozone Standards 7 – 15 parts per million - hours

(Based on 2006 – 2008 Air Quality Data)

EPA will not designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.



No monitored counties outside the continental U.S. violate.

Significant Issues from Ozone Transport Conference

- Background ozone levels in the west are high.
 - Transport of ozone or precursors from Asia can have a significant impact, especially during the spring.
 - Asian impact is increasing
 - Impact is concentrated in western US
 - Stratospheric intrusion can have a significant impact, especially at higher altitude sites.
 - Very high impacts when a front moves through an area
 - Impact is not limited to that short-term event. Higher ozone occurs across a broad area for several days
 - Stratospheric intrusion and mixing occur on an on-going basis even without these events
 - **Wildfires have a significant impact on ozone levels. Interannual variability corresponds to variability in fire.**
 - Altitude and topography are important factors in ozone levels.