



Wildfire Smoke

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Wildfire Smoke

- Respiratory Issues:
One in three households
- Cost: \$8-\$80/day/person
- Premature mortality:
 - 180,000/yr globally
 - 2,500/yr US

Public heeds air quality warnings





Wildland Fire Air Quality Response Program (WFAQRPP)

Dissemination of data/info to inform the public about forecasted smoke conditions during large wildfire events

- Air Resource Advisors
- Deployed to Incident Command Teams and Geographic Area Commands
- Modeling, Monitoring, Messaging
- 170 Dispatches since 2012

Fire: Burning operations yesterday were successful. It is anticipated that today there will be less smoke production allowing the smoke in the valleys to lighten.

Air Quality Today: Because of the light and shifting transport winds combined with terrain-driven winds smoke in most areas should improve.

Air Quality Tomorrow: The outlook depends on progress with the burnout operations but we expect continued improvements in air quality.

Particulate Matter (PM 2.5) Impacts from the Soberanes Fire (midnight to midnight)

Site*	Yesterday Observed 24-Hr AQI September 18, 2016	Today's Forecast 24-Hr AQI September 19, 2016	Tomorrow Outlook 24-Hr AQI September 20, 2016	Best Time of Day September 19 24-Hr AQI
Carmel River School	Moderate	Moderate	Moderate	Morning
Carmel Valley	Unhealthy	Unhealthy for Sensitive Groups	Moderate	Afternoon/ Evening
Toro Park	Good	Good	Good	Good
Cachagua	Unhealthy	Unhealthy for Sensitive Groups	Moderate	Afternoon/ Evening
Big Sur	Unhealthy for Sensitive Groups	Unhealthy for Sensitive Groups	Moderate	Steady thru the Day
Tassajara	Unhealthy	Unhealthy	Unhealthy for Sensitive Groups	Afternoon/ Evening
Arroyo Seco	No Monitor	Unhealthy for Sensitive Groups	Unhealthy for Sensitive Groups	Daytime
Salinas	Good	Good	Good	Good
Gonzales	Good	Good	Good	Good
Soledad	Monitor Down	Moderate	Good	Good
Greenfield	Good	Moderate	Good	Good
King City	Good	Good	Good	Good
Lockwood	Moderate	Good	Good	Good



Rocky Arroyo / Endurapix.com



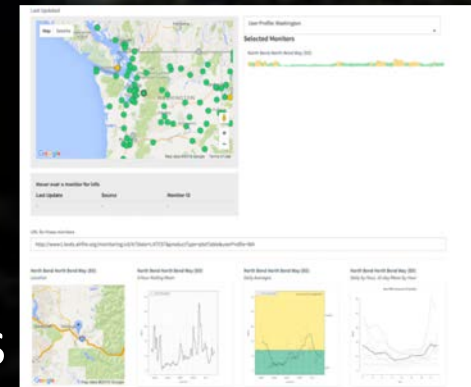
Smoke and Fire Research for Air Quality & Public Health

Pioneered a smoke modeling framework used in AQ forecast systems nationally and internationally

Deliver research

- Tools
- Training
- Technical consultations

Users: land managers, incident command teams, and many other agencies

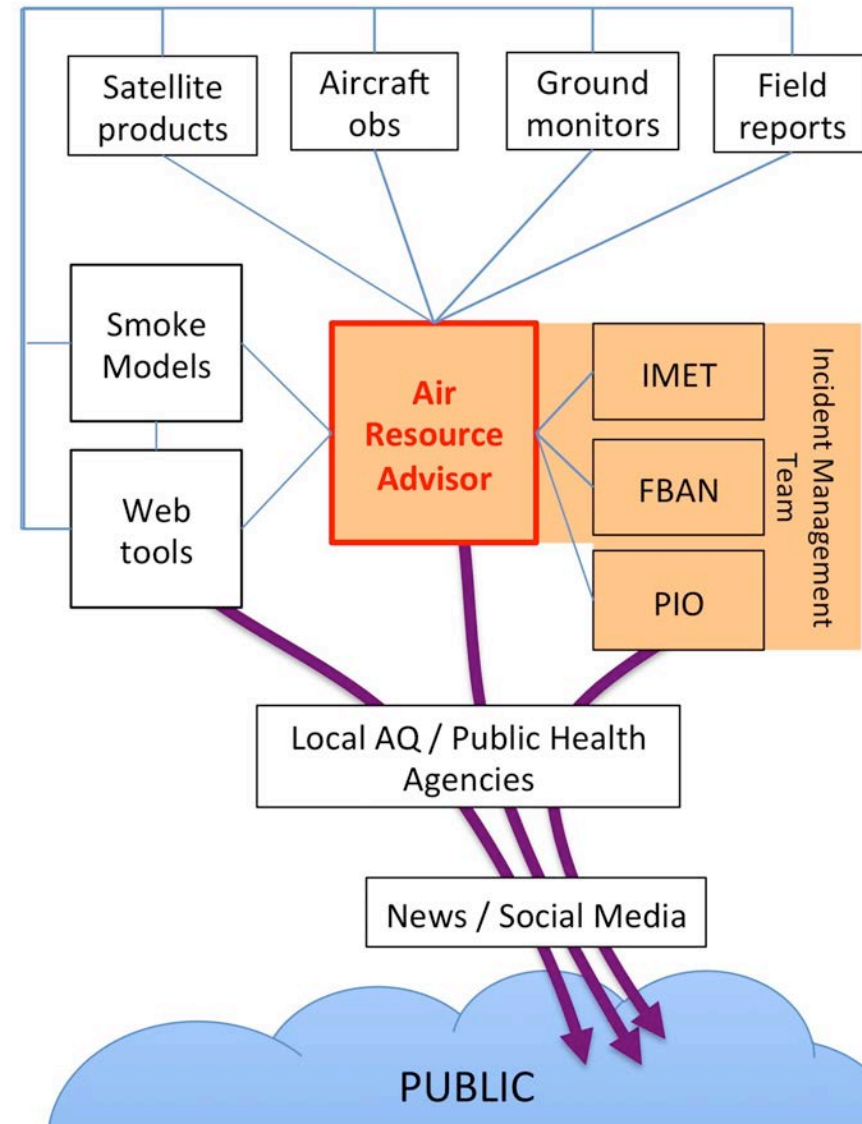




Smoke and Fire

PHOTO: Andres Holland, ARA

- Smoke information flow during wildfire incidents
- Complex web of data sources, models, products
- Has to be distilled for use in
 - Management decisions
 - Public health decisions
 - Public information



Thank You!

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National Fire
Decision Support System

