

# 1 Problem

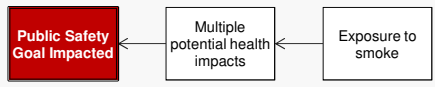
<b>What</b>	Problem(s)	Spread of >10 wildfires, smoke
<b>When</b>	Date	Summer 2015
		Ongoing
<b>Where</b>	Different, unusual, unique	Unusually large number of wildfires
	Geographic area	Across California

## Impact to the Goals

<b>Public Safety</b>	6 confirmed killed in fires; risk of injury
	Multiple potential health impacts
<b>Worker Safety</b>	4 firefighters burned
<b>Animal Safety</b>	Risk of death, injury to animals
<b>Environmental</b>	Smoke spreading in air
<b>Customer Service</b>	~13,000 evacuated
<b>Production/ Schedule</b>	Long-term impact on area businesses
<b>Property/ Equipment</b>	~700,000 acres burned
	>1,000 buildings destroyed
<b>Labor/ Time</b>	15,000 deployed to fight fires

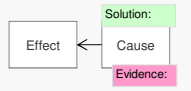
# 2 Analysis

**Basic Level Cause Map** - Start with simple Why questions.

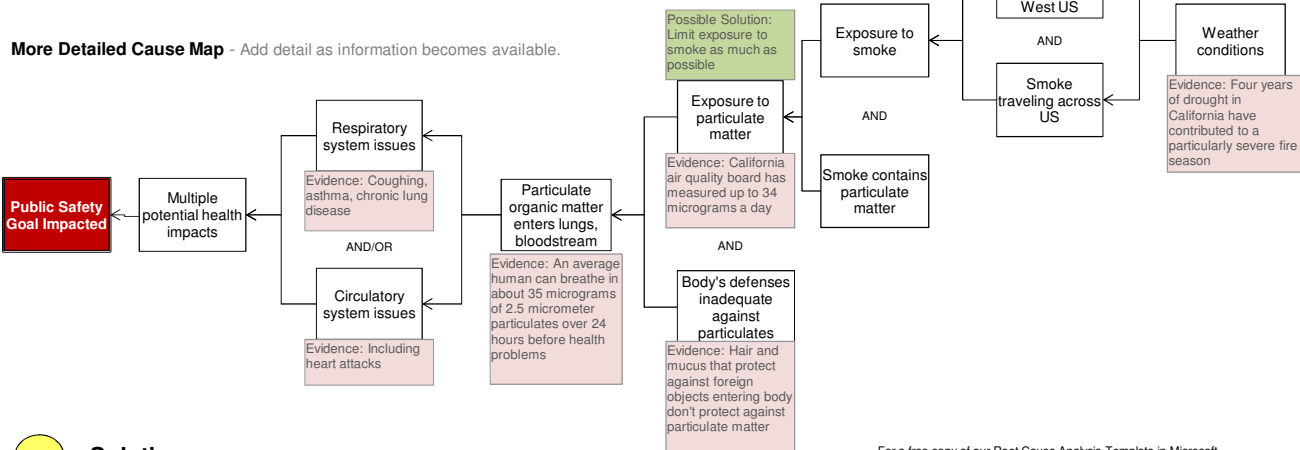


### Basic Cause-and-Effect

The organic matter in smoke is so small it can enter the lungs and bloodstream, causing potential health impacts including asthma, chronic lung disease and even heart attacks.



**More Detailed Cause Map** - Add detail as information becomes available.



# 3 Solutions

Unfortunately, the only really effective protection against health impacts from smoke is to stay inside with air conditioning on recirculate if in an affected area. Most air masks won't help, as they don't protect against the tiny particles of concern. Instead, health officials reiterate that if the air quality in your area is poor, stay indoors to protect your health.

# WILDFIRE SMOKE CAUSES HEALTH PROBLEMS

## Millions impacted by multiple fires in western US

Cause Map

The huge number of wildfires in the western US is impacting not only the areas directly involved in the fires, but a large portion of the rest of the country. The smoke from these wildfires is causing issues including concern for respiratory and circulatory system health issues. In some areas, people have been told to stay inside - the only really effective way to prevent particulates from smoke from entering their bodies.

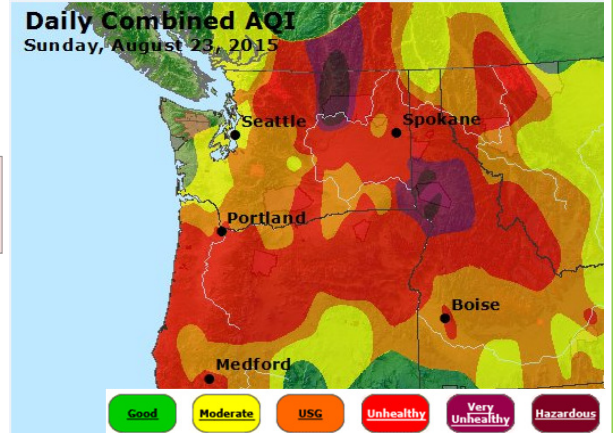
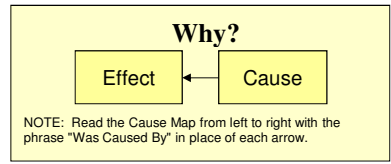
"If you can smell smoke, then basically you're breathing it."  
 - Sylvia Vanderspek, chief air quality planner, California Air Resources Board

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

### CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

- Step 1 **Problem** - What's the Problem?
- Step 2 **Analysis** - Why did it happen?
- Step 3 **Solutions** - What will be done?



From AirNow.gov

"It's really bad. I hadn't seen 'code maroon' days, which is the most hazardous air quality, in years."

- Janice Nolan, assistant vice president for national policy, American Lung Association

For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

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