



Training for Wildfire Recovery, Cleanup, and Resiliency

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Western Region Universities Consortium (WRUC)

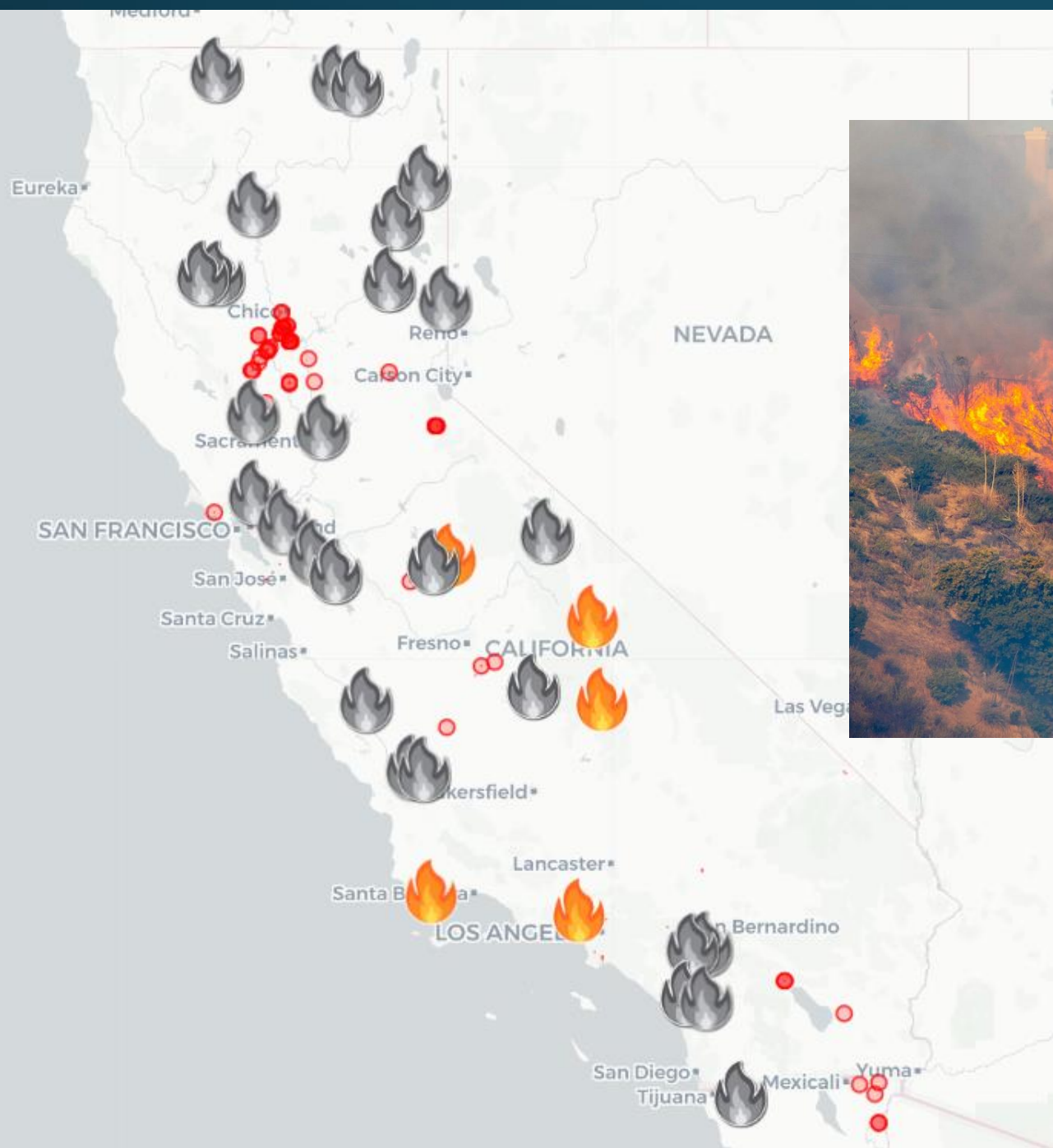
UCLA Labor Occupational Safety and Health Program (LOSH)

Overview of Presentation

- Scale and scope of recent California wildfires
- Workers involved in wildfire response and recovery
- WRUC partnerships and training approach
- Training materials and activities

**Have you or someone you
know been affected by
wildfires?**

Scale and Scope of Recent California Wildfires



Six of the 10 most destructive fires in California have occurred in the last two years

Camp Fire (Butte, 2018)

Tubbs Fire (Napa/Sonoma 2017)

Woolsey Fire (Ventura, 2018)

Carr Fire (Shasta/Trinity, 2018)

Nuns Fire (Sonoma, 2017)

Thomas Fire (Venture/Santa Barbara, 2017)



Recent Wildfires in Southern California

Skirball Fire (Los Angeles)	December 2017
Creek Fire (Los Angeles)	December 2017
Rye Fire (Los Angeles)	December 2017
Thomas Fire (Ventura, Santa Barbara)	December 2017
Lilac Fire (San Diego)	December 2017
West Fire (San Diego)	July 2018
Woolsey Fire (Los Angeles, Ventura)	November 2018
Saddleridge Fire (Los Angeles)	October 2019
Tick Fire (Los Angeles)	October 2019
Getty Fire (Los Angeles)	October 2019
Easy Fire (Ventura)	October 2019
Maria Fire (Ventura)	October 2019



Workers Involved in Wildfire Response and Recovery



Getty Fire, Los Angeles (October 2019)

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Immigrant workers endure brutal labor conditions as California burns

By Teresa Cotsirilos

August 07, 2019

Tweet Recommend 0

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A lone palm tree against the smoke of the Woolsey Fire. (Photo courtesy of Peter Buschmann/USFS)

When the Woolsey Fire started last November, Eladio Osorio was standing in front of a Malibu labor center, trying to drum up work. He and the other day laborers could see the black smoke unfurling in the distance. Then a man pulled up and said he had a special job for them.

"I need help, maybe four or five people to help me keep the fire away from my house," Osorio remembers him saying.

Osorio had never fought a fire before, and he didn't have any gear. In an interview with La Opinión, one of Los Angeles' Spanish-language newspapers, he said the man drove Osorio and several other laborers to a tony house in Malibu. Osorio says he could see the wildfire in the distance, burning behind the house for 24 hours, sleeping in shifts and spraying everything he could think of and asked them not to leave me," he says,

Los Angeles Times

CALIFORNIA

Getty fire: Housekeepers and gardeners go to work despite the flames





WRUC Partnerships and Training Approach



 **NDLON** NATIONAL DAY LABORER ORGANIZING NETWORK





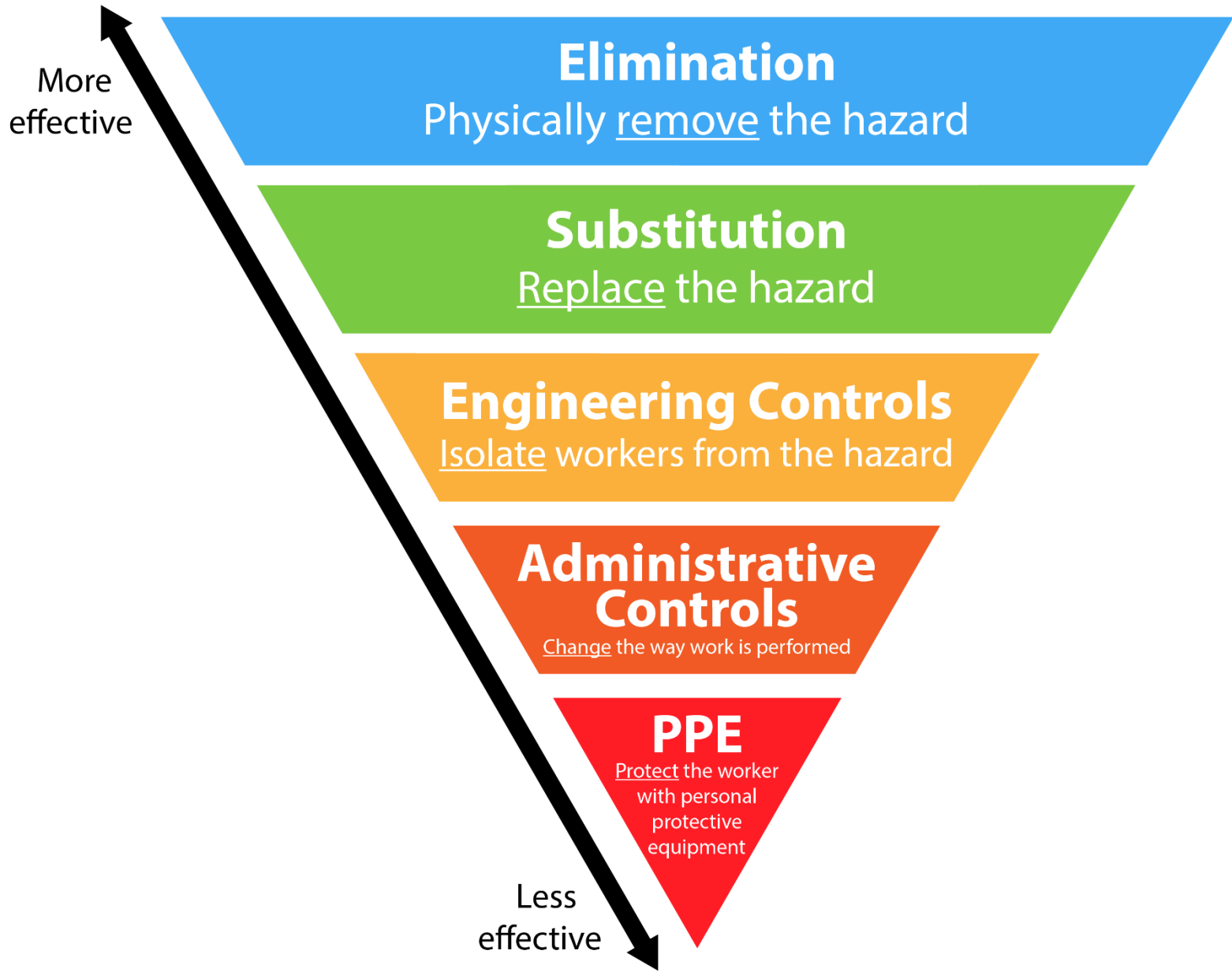
Sonoma, California, Dec 2017



Los Angeles, California, Nov 2018

Training Approach

- Direct awareness-level training for workers (1-2 hrs)
 - Hazard identification, hazard control, worker rights



Training Approach (continued)

- Direct awareness-level training for workers (1-2 hrs)
 - Hazard identification, hazard control, worker rights
- Trainer development/Train-the-Trainer for community health *promotoras*, worker-leaders, worker center staff (4-8 hrs)
 - Peer trainer model
- Capacity building for worker organizations
- Information for employers/homeowners

Training Materials and Activities

¿Ha tenido alguna experiencia trabajando en la limpieza y/o reconstrucción durante o después de un incendio forestal?

¿Qué riesgos o peligros existen?







Objetos cortantes

Objetos pesados

Cenizas, hollín y polvo





Estructuras inestables

Asbesto

Electricidad

Riesgos a la seguridad

- Incendio
- Electricidad
- Gases inflamables
- Estructuras inestables
- Demolición



Riesgos a la salud

- Ceniza, hollín y polvo
- Intoxicación por monóxido de carbono
- Asbesto



Ceniza, hollín y polvo

- Pueden ser inhalados y causar irritación o daño a los pulmones de trabajadores

- No es recomendado que las personas con padecimientos cardiacos o pulmonares participen en la limpieza de cenizas, hollín, o polvo

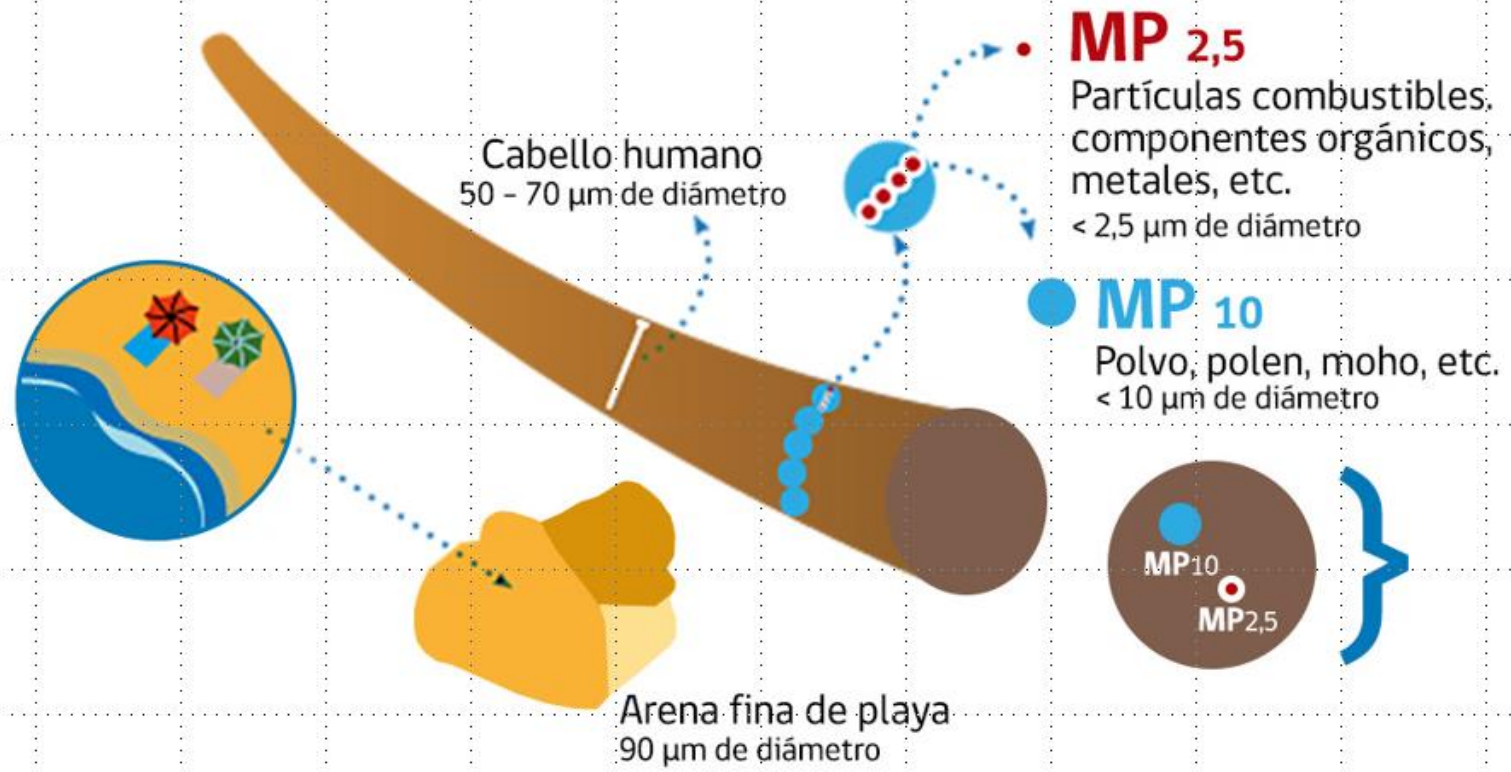


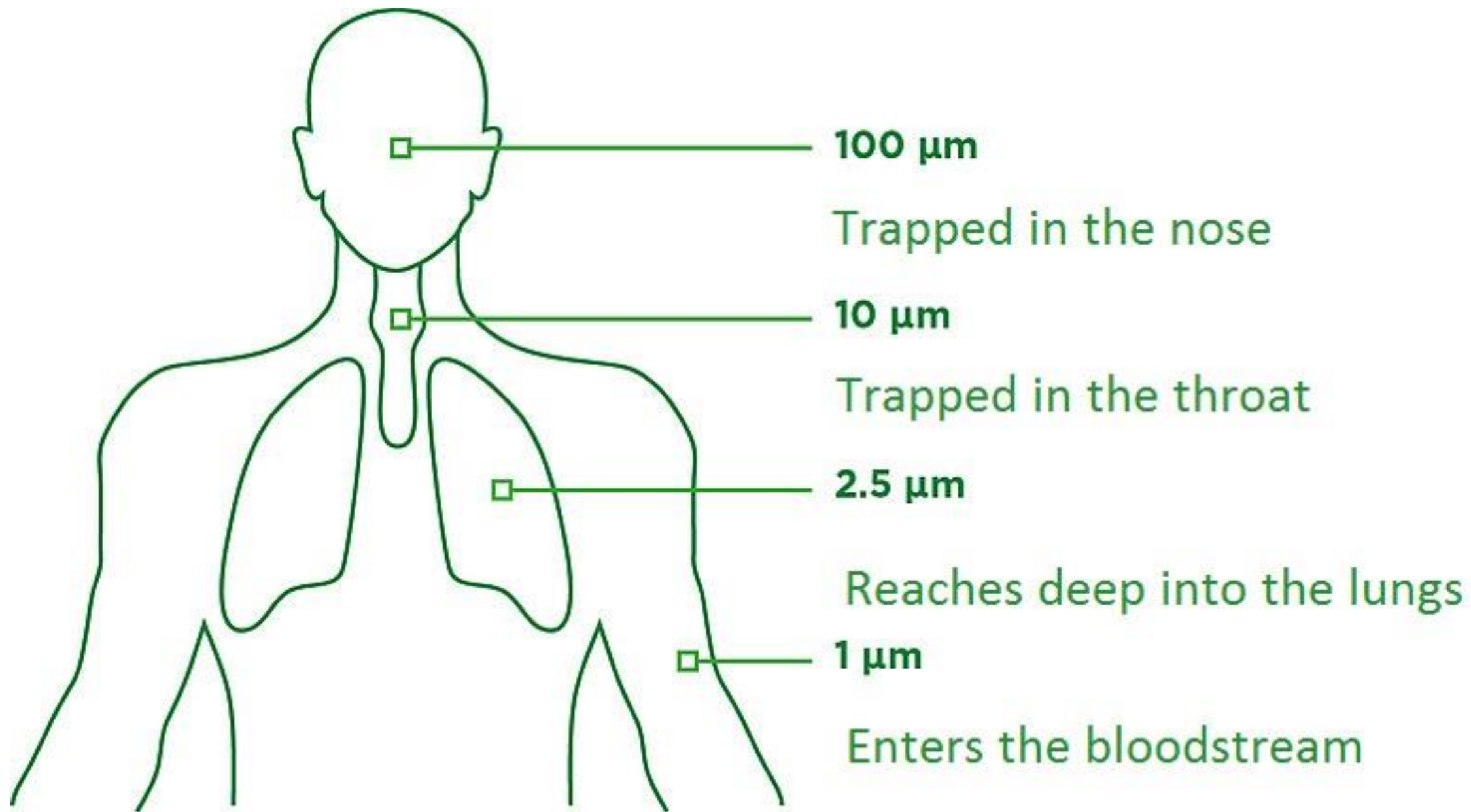
Material particulado (contaminación por partículas)

- Mezcla de partículas sólidas y gotas líquidas que se encuentran en el aire
- Algunas partículas, como el polvo, la suciedad, el hollín, o el humo, son lo suficientemente grandes y oscuras como para verlas a simple vista
- Otras son tan pequeñas que solo pueden detectarse mediante el uso de un microscopio electrónico



PM 2.5







Tipos de respiradores purificadores de aire

Respirador con mascarilla de filtrado (FFR)



- Desechable
- Cubre la nariz y la boca
- Filtra las partículas, como el polvo, los aerosoles y los gases
- Se puede seleccionar entre las series N, R y P y los niveles de eficacia 95, 99 y 100
- NO proporciona protección contra gases y vapores
- Requiere prueba de ajuste

Respirador elastomérico de media cara

- Mascarilla reutilizable; cartuchos y filtros reemplazables
- Se puede usar para proteger contra gases, vapores o partículas, si está equipado con el cartucho o filtro adecuado
- Cubre la nariz y la boca
- Requiere prueba de ajuste



NIOSH RESPIRATOR FILTER CLASSES

NIOSH classifies the filtering media in respirators based on its resistance to oil and its particle filtering efficiency. The resistance to oil is designated as "N", "R", or "P". Particle filtering efficiency is designated "95", "99", or "99.97".



**NOT RESISTANT
TO OIL**

N95, N99, N100
Filters at least
95%, 99%, or 99.97%
of airborne particles

**SOMEWHAT RESISTANT
TO OIL**

R95, R99, R100
Filters at least
95%, 99%, or 99.97%
of airborne particles

**STRONGLY RESISTANT
TO OIL/OIL PROOF**

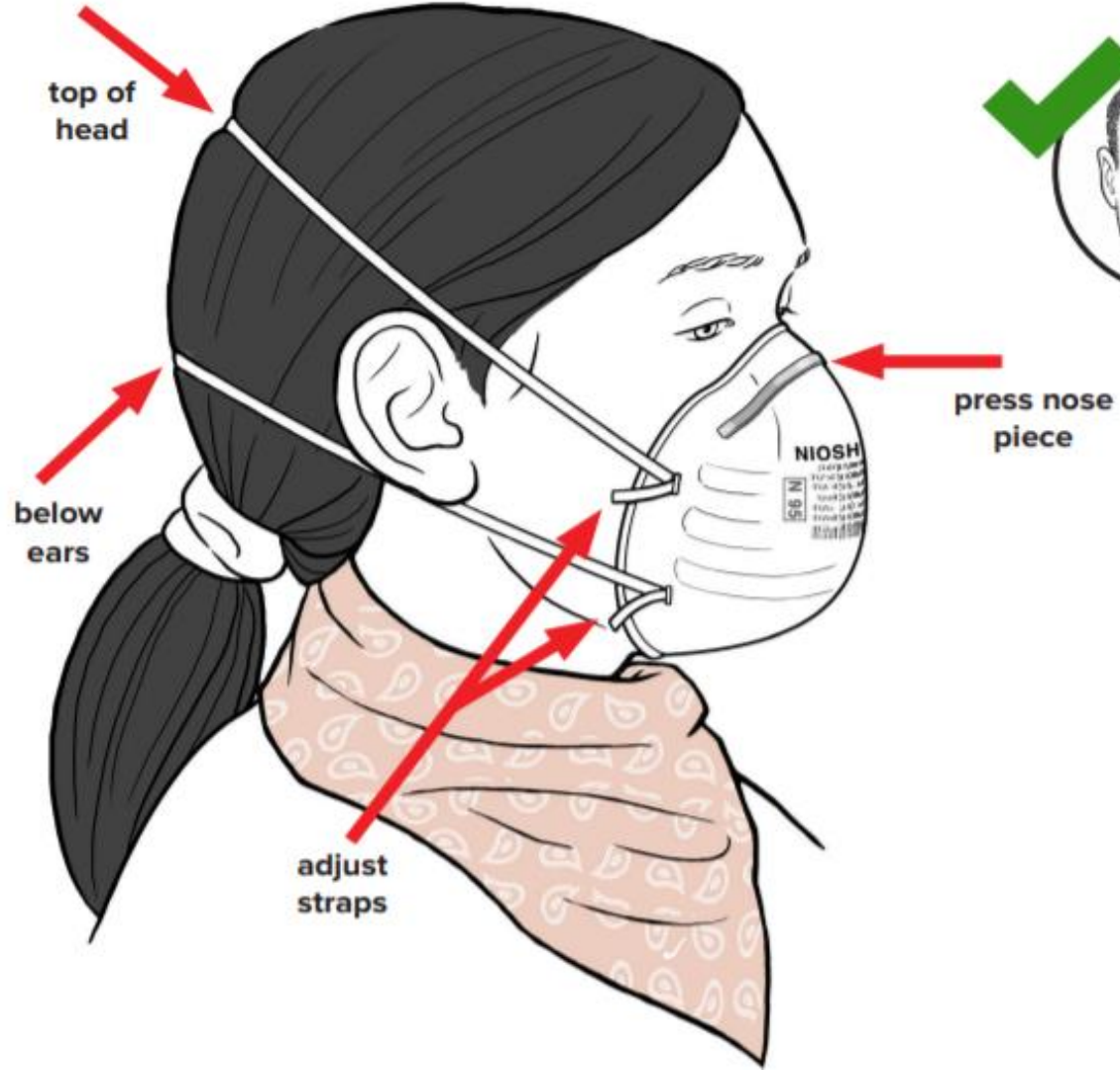
P95, P99, P100
Filters at least
95%, 99%, or 99.97%
of airborne particles

OILS

When products containing oil (like fuel, lubricating or hydraulic oils, solvents, paints, and pesticides) are sprayed or used in processes producing aerosols or droplets, the oil component may become airborne.



Respirators



¡Es tiempo de practicar!



It's time to practice!





Los Angeles, California, Nov 2018



Pasadena, California, Oct 2019



Pasadena, California, Oct 2019

Other Education Materials

WORKER PROTECTION FROM WILDFIRE SMOKE

Emergency Cal/OSHA Standard 2019

California's recent wildfire seasons have confirmed fears of worsening fire conditions that have become a year-round threat. Increasingly, workers in the path of wildfire smoke have been the focus of concern given the health impacts of exposure. In December 2018, worker advocates in the state urged the California Division of Occupation Safety and Health (Cal/OSHA) to take measures to address this growing worker health threat.

The Cal/OSHA Standards Board voted to adopt an emergency temporary standard to protect workers from exposure to wildfire smoke. The temporary standard went into effect on July 29, 2019 and will remain effective for up to one year. Cal/OSHA is now developing a permanent standard.



Photo: CAUSE (Central Coast Alliance United for a Sustainable Economy) @CAUSE805

HOW DOES WILDFIRE SMOKE AFFECT HEALTH?

Wildfire smoke includes ash and tiny particles that can travel through the air over long distances. These particles are made up of whatever is being burned – not only plants and vegetation, but also remnants of residential or commercial structures, vehicles, industrial or household chemicals, and other unknown materials. Many of these particles are invisible to the naked eye.

Individuals may experience health symptoms if they breathe in these smoke particles. These symptoms can include:

- Irritation of the eyes, nose, and throat
- Difficulty breathing
- Asthma attacks
- Chest pain
- Persistent cough, phlegm, and wheezing

Particulate matter can also cause more serious longer term health problems, such as reduced lung function, chronic bronchitis, worsening of asthma, heart failure, and early death.

Adults over 65 years of age, children, and individuals with pre-existing health conditions are at higher risk for smoke-related health problems.

DEFINITIONS:

AQI: Air Quality Index. An index that indicates air pollution and associated health concerns

- Real-time AQI for any location in the U.S. is available at: www.airnow.gov

PM2.5: Particles (or "particulate matter") with a diameter of 2.5 micrometers or less - about 36 the thickness of a strand of human hair. The small size of PM2.5 particles allows them to reach deep into the lungs and even enter the bloodstream.

WHEN ARE EMPLOYERS REQUIRED TO ACT?

The emergency standard is triggered when the AQI (air quality index) for PM2.5 at the worksite exceeds 150. An AQI above 150 indicates that the air is "unhealthy" to breathe. Employers must monitor air quality using publicly accessible forecasts of AQI for PM2.5 or by directly measuring PM2.5 levels at the worksite.

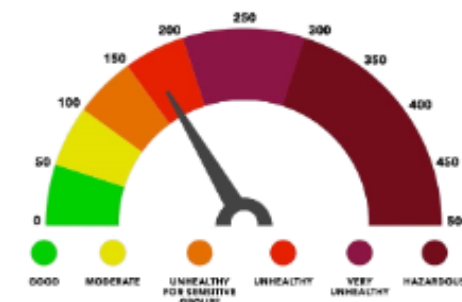


Photo: Cowaymega

WHO DOES THE EMERGENCY STANDARD APPLY TO?

The emergency standard applies to both outdoor and indoor workers who may be exposed to wildfire smoke for more than one hour per day, even if they are not directly impacted by fires.

This may include:

- Construction Workers
- Agricultural Workers
- Utility Workers
- Landscapers and Gardeners
- Day Laborers and Domestic Workers
- Warehouse Workers
- School Personnel

The emergency standard does not apply to wildland firefighters or workers in enclosed buildings, structures, or vehicles with filtered air systems.

WHAT PROTECTIONS DOES THE EMERGENCY STANDARD PROVIDE?

When the AQI for PM2.5 exceeds 150, employers are required to:

- Communicate with workers about current AQI PM2.5 at the worksite and the potential symptoms of wildfire smoke exposure
- Provide training on the health effects of wildfire smoke, protections available to them, and procedures for obtaining medical treatment
- Reduce workers' exposure to wildfire smoke by providing enclosed building or vehicles with filtered air, relocating work where the AQI or PM2.5 is lower than 151, changing work schedules, lessening work intensity, and/or accommodating longer rest breaks
- Provide respirators (NIOSH-approved N95 filtering face piece respirators) and encourage their voluntary use
- As currently written, the emergency standard requires respirator use along with mandatory fit testing for workers if the AQI for PM2.5 exceeds 500

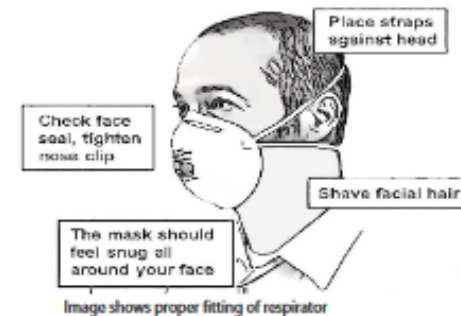


Photo: Cal/OSHA

NEXT STEPS

- Cal/OSHA is working to develop a permanent standard to protect outdoor workers from wildfire smoke.

To download this and other LOSH factsheets, visit losh.ucla.edu

Produced by the UCLA Labor Occupational Safety and Health Program (LOSH) under a grant from the National Institute for Environmental Health Sciences (NIEHS) Worker Training Program (Grant no. 3U45ES006173), October 2019.

THANK YOU

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