## **Disasters in the Western Region and Impacts on EJ Communities**

Kevin Riley, PhD MPH Director, Western Region Universities Consortium UCLA Labor Occupational Safety and Health Program

April 7, 2021

#### Western Region Universities Consortium (WRUC)

UCLA Labor Occupational Safety and Health Program (LOSH)

UC Berkeley Labor Occupational Health Program (LOHP)

Arizona State University

University of Washington







2019 Zender RACEJT Students Attending Community Spill Response in Anchorage, AK













# Have you been impacted by wildfires in the last several years?

¿Ha sido afectado/a por incendios forestales en los últimos años?

#### Top 10 Largest California Wildfires

Name	Start Date	Counties	Acres
1. August Complex	August 2020	Glenn, Lake, Mendocino, Tehama, Trinity	1,032,649
2. Mendocino Complex	July 2018	Mendocino, Lake, Colusa, Glenn	459,123
3. SCU Lightning Complex	August 2020	Santa Clara, Alameda, Contra Costa, San Joaquin, Merced, Stanislaus	396,624
4. Creek	September 2020	Fresno, Madera	379,895
5. LNU Lightning Complex	August 2020	Colusa, Lake, Napa, Sonoma, Solano, Yolo	363,220
6. North Complex	August 2020	Plumas, Butte	318,935
7. Thomas	December 2017	Ventura, Santa Barbara	281,893
8. Cedar	October 2003	San Diego	273,246
9. Rush	August 2012	Lassen	271,911
10. Rim	August 2013	Tuolumne	257,314

Source: California Department of Forestry and Fire Protection (Cal Fire) <u>https://www.fire.ca.gov/media/4jandlhh/top20\_acres.pdf</u>

#### 2020 West Coast Wildfires

#### Megafire or gigafire? California's million-acre August Complex fire is so overwhelming, experts disagree on what to call it

Published: Oct. 7, 2020 at 12:00 p.m. ET — By Nicole Lyn Pesce

5 of the largest wildfires in California history have burned this year alone





#### 2020 West Coast Wildfires





#### Camp Fire, November 2018

Butte County Burned 153,336 acres Destroyed 18,805 structures 85 fatalities

Destroyed most of Paradise, CA, and several adjacent communities



#### Woolsey Fire, November 2018



#### Los Angeles and Ventura Counties

Prompted evacuation of more than 295,000 people

Burned 96,969 acres

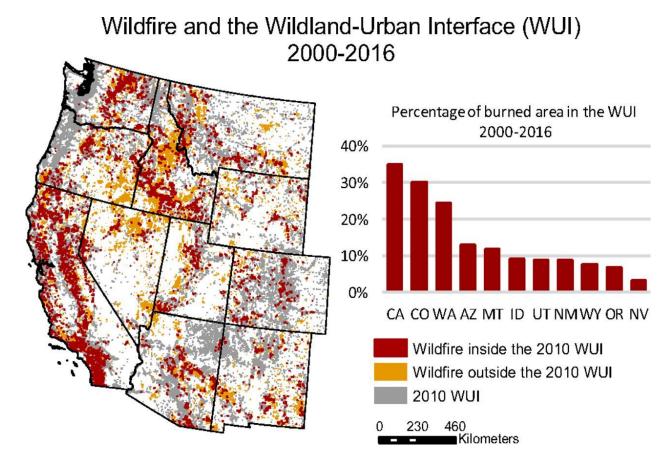
Destroyed 1,643 structures

#### What is contributing to wildfire patterns?



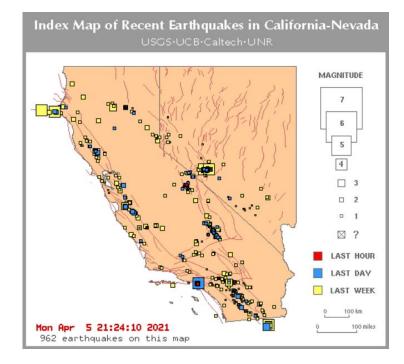






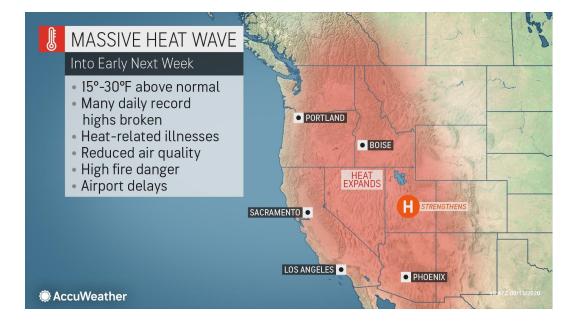
Tania Schoennagel, Jennifer K. Balch, Hannah Brenkert-Smith, et al., Adapt to more wildfire in Western North American forests as climate changes. *Proceedings of the National Academy of Sciences* May 2017, 114 (18) 4582-4590; DOI: 10.1073/pnas.1617464114

#### Earthquakes



Earthquakes

Heatwaves



Earthquakes

Heatwaves

**Industrial Hazmat Disasters** 



Earthquakes

Heatwaves

Industrial Hazmat Disasters

**COVID-19** Pandemic



Earthquakes

Heatwaves

Industrial Hazmat Disasters

COVID-19 Pandemic

**Combined Disaster Events** 



### **Disaster-Vulnerable Communities**

# What communities do you work with that may be vulnerable during or after a disaster?

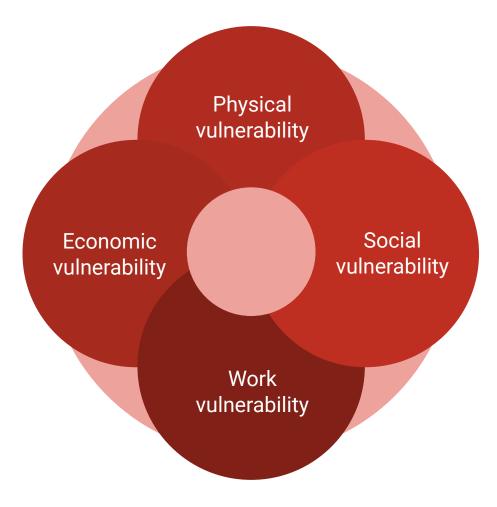
¿Con qué comunidades trabaja que puedan ser vulnerables durante o después de un desastre?



CODE: 33 40 89 4

#### **EJ communities and disasters**





#### Wildfires: Disaster-exposed residents

Undocumented Immigrants Were Afraid To Use California Wildfire Shelters, So They Slept On Beaches





#### Wildfires: Essential workers

"Touted as 'Essential'... Treated as Disposable": Labor Day Anger as Migrant Farm Workers Toil Inside Wildfire Evacuation Zones





#### Cal/OSHA Wildfire Smoke Standard



Air Quality Index - Particulate Matter		
301–500	Hazardous	
201–300	Very Unhealthy	
151–200	Unhealthy 🧲	
101–150	Unhealthy for Sensitive Groups	
51-100	Moderate	
0-50	Good	

#### Wildfires: First responders



#### Los Angeles Times

#### CALIFORNIA

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



#### Wildfires: Disaster recovery labor force





## Training for Workers and Communities for Disasters

**Training Approach** 

• Hazard awareness training for workers and community members

### **Training Approach**

- Hazard awareness training for workers and community members
- Community capacity building
  - Train-the-Trainer model, worker leaders, community health *promotoras*

### **Training Approach**

- Hazard awareness training for workers and community members
- Community capacity building
  - Train-the-Trainer model, worker leaders, community health *promotoras*
- New models of community-based infrastructure
  - Adaptation of CERT model, disaster response and resiliency hubs













Kevin Riley Western Region Universities Consortium <u>kriley@irle.ucla.edu</u>