

UC Berkeley professors discuss the California wildfires and air quality

“Air pollution is arguably the greatest environmental catastrophe in the world today”

By David Levine
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Beginning on October 9 the California utility giant Pacific Gas and Electric (PG&E) began shutting off power to customers across the state to ostensibly prevent their dilapidated infrastructure from sparking wildfires. One of their downed power lines in 2018 sparked the Camp Fire, the deadliest and most destructive wildfire in state history. Since then, PG&E and the other major utilities have carried out shutoffs impacting over 3 million people.

The shutoffs to consumers have predictably not prevented the outbreak of wildfires. In relation to the Kincade Fire that has burned over 77,000 acres in Sonoma County, PG&E has filed an incident report pointing to an energized transmission line of theirs that was downed in the area of the fire. So far this season, fires have forced hundreds of thousands to evacuate. The latest large fire, the Maria Fire, broke out on October 31 in Ventura County and quickly consumed more than 9,000 acres.

Millions of residents who have so far avoided evacuations and blackouts remain affected by the vast clouds of ash spreading over the state. The WSWs spoke with two professors at University of California (UC) Berkeley about the issues of firefighting and air quality.

Dr. Richard A. Muller is a professor of physics at UC Berkeley. He has published research on issues of air pollution, a summary of which appeared in 2015 on the Berkeley Earth website. This ends with the startling conclusion:

“Air pollution kills more people worldwide each year than does AIDS, malaria, diabetes or tuberculosis. For the United States and Europe, air pollution is equivalent in detrimental health effects to smoking 0.4 to 1.6 cigarettes per day. In China the numbers are far worse; on bad days the health effects of air pollution are comparable to the harm done smoking three packs per day (60 cigarettes) by every man, woman, and child. Air pollution is arguably the greatest environmental catastrophe in the world today.”

The World Socialist Web Site contacted Dr. Muller recently to solicit his comments related to California’s air quality problems. Air quality has declined sharply in many parts of

California recently in connection with wildfires.

WSWS: What is the relation of the current forest fires to the air pollution problem in California?

Dr. Richard A. Muller: In California, we currently are experiencing air pollution effects equivalent to 1-3 cigarettes per day for every man, woman and child. For each one of those cigarettes, equivalents inhaled by the state’s population, about one person dies of an illness caused by air pollution.

What we’re experiencing in California is minuscule compared to what they’re experiencing in China. Hundreds of people die each day in China from air pollution. It’s a more serious problem in the world than global warming right now.

WSWS: What are the usual sources of PM2.5 (small particulate matter, 2.5 microns in size or less, described as the most harmful pollution in Dr. Muller’s note on the Berkeley Earth website)?

RAM: It’s coal and forest fires. In China, it’s mostly coal, also some automobiles. Natural gas causes almost no pollution of this type. Neither does nuclear power. Natural gas and nuclear are the two technologies that will save lives in China. I hope that your organization supports transitioning from coal to natural gas and nuclear power.

WSWS: We support a scientific approach to the issue.

RAM: Lots of people say they support a scientific approach, and then they just quote one guy with a PhD who happens to support their politics. Natural gas and nuclear energy are the technologies that will save lives and restore a healthy living environment for hundreds of millions of people in China, not even to speak of the rest of the world.

The World Socialist Web Site also recently spoke with Jameson Karns, an academic specializing in the field of fire management at UC Berkeley.

WSWS: What is your background?

Jameson Karns: I worked for about a decade for the fire service in Southern California. I am now an academic at UC Berkeley. I look at the historical as well as global forms of fire

management. I look at the institutional role, as well as the societal and cultural approaches to fire management.

WSWS: How do you evaluate fire management in California?

JK: In California, fires are normal. They're as natural and necessary as rain. It's a natural ecological process throughout the state. There are many species that are dependent on fires. This is a concept that the Native Americans knew very well.

When things really changed was with Eisenhower's Federal Highway Act of 1956. It placed an immense amount of pressure on our emergency services. Now, we have these much smaller communities that are being built farther away from the urban centers. For many of the suburbs, their appeal is that they're sort of tucked away in nature. But they are located in ecosystems where fires are entirely natural.

WSWS: What can be done to protect such communities?

JK: One of the ways to mitigate the threat is a proactive approach, including prescribed burning. When they start small, these are controlled fires that burn out the region. The fire can be controlled so that it doesn't approach as close to people's property, and if it does, then only in a minute manner. But it's not something that is very attractive for a lot of communities. It's not something that's super feasible.

In California, we have this ongoing zeitgeist with fire management. When we talk about it as a culture, or even as a nation, the focus is always on California. In almost the same way you see battlefield coverage. There is a bit of irony that we really enjoy seeing the natural phenomenon invade in this way. The public at large seems to respond really well to these visualizations of fire management. There hasn't been a buy-in that recognizes fires as part of the natural environment.

The method we use for firefighting in California now is an extremely labor-heavy approach. Fighting fires on the wild land-urban interface requires an immense amount of manpower. It's not uncommon to see fire departments from another state come in to assist in fighting fires, in addition to those who get relocated from major cities like Los Angeles and San Diego. We use some of the most high-tech equipment available. Managing these things takes an immense amount of resources. As Californians, we've embraced this approach year after year for something that actually is supposed to occur in a healthy landscape.

We will need pretty soon to transition to a more community-based, proactively involved approach. One of the things we're noticing with climate change is that the fires are getting larger and larger. We need proactive management with methods such as prescribed burning. We're going to have to look at the viability of some of these communities.

WSWS: Are you saying that hundreds of thousands or millions of people should be relocated?

JK: I won't go as far as saying that now. But I will say that the viability of communities will need to be considered differently than it has been up to this point. In the affected

communities, there's no doubt that people there are suffering immense losses. But those communities are nestled within ecosystems where wildfires are intrinsic. We need to consider the amount of resources that would be needed to maintain the communities in those areas. I think we really need to assess whether this defensive approach rather than a proactive approach is the right approach.

WSWS: Can you comment on the role of PG&E?

JK: They are tapping into this defensive notion of fire management that I was talking about. They still see the issue through the lens of a catastrophe that continually needs to be suppressed. They're feeding into that approach. This does play into the annual public spectacle of fire management through the discourse of an emergency. However, history has shown that that doesn't always work out for the utility companies. For example, there was a huge shift in public opinion after the 1906 San Francisco earthquake and resulting fires, which, in turn, resulted in public ownership of some of the utilities.

WSWS: What about the issue of above-ground power lines that could be buried underground to prevent fires from affecting residential areas?

JK: I'm in complete agreement with that. These systems need to be modernized. But it's more than just that. It's almost kind of like we're gridlocked in this system of responding to these fires instead of proactively engaging them. That's what needs to change.

WSWS: Is there anything else you would like to comment on for our readers?

JK: About a third of the firefighters in California are inmates. They're incarcerated here in California, but they agreed to act as firefighters. They get about a dollar a day and get one day reduced from their prison term for each day they spend fighting fires. A bill currently in the California State Assembly is proposing that such inmates be allowed into the fire service immediately following their release. This has been a very controversial topic.

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