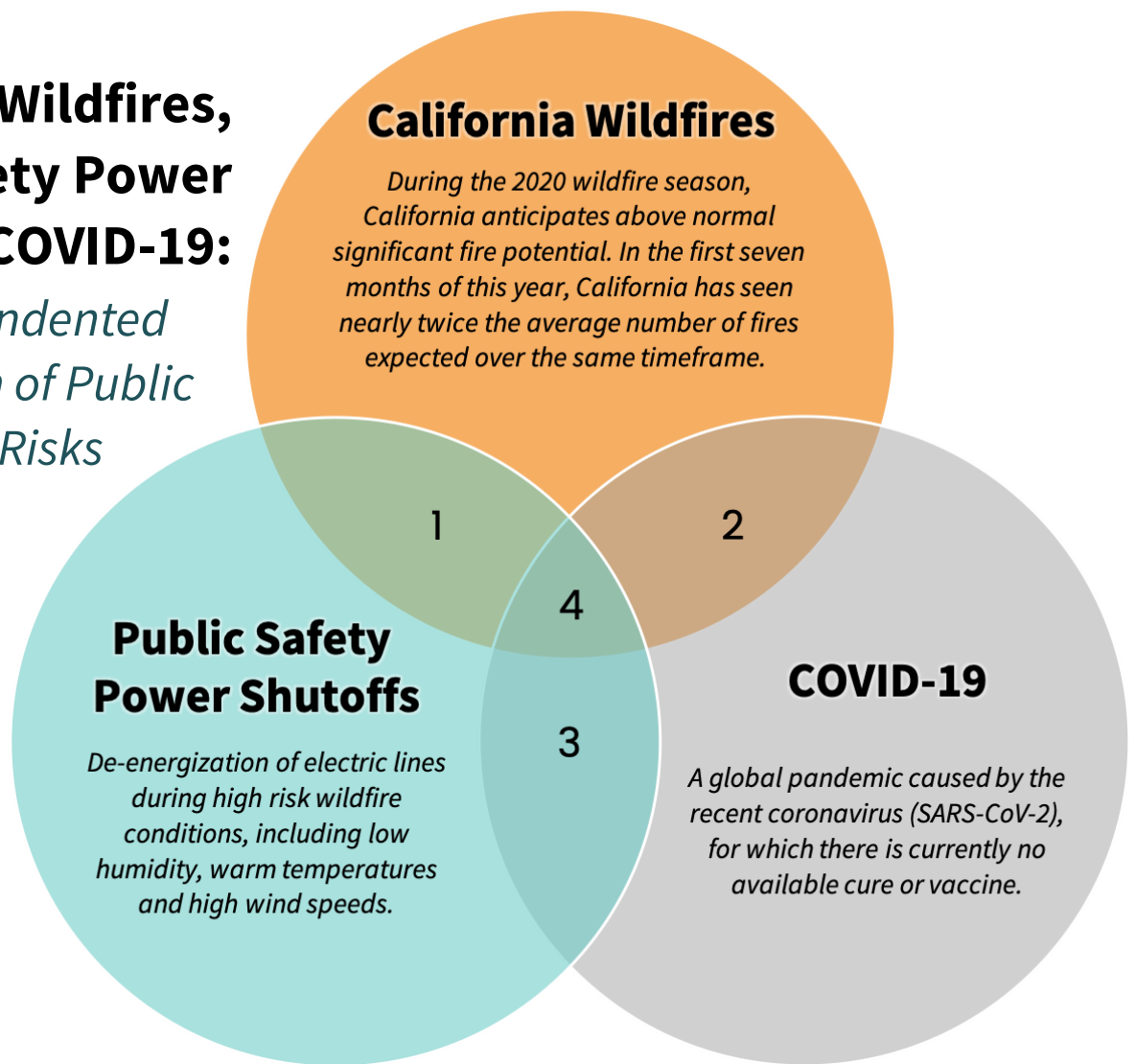


California Wildfires, Public Safety Power Shutoffs & COVID-19:

A Unprecedented Intersection of Public Health Risks



Overlapping Implications for Public Health

1 California Wildfires & PSPS

Continuity of electricity supports critical functions during wildfires and wildfire smoke events, including the ability to:

- Safely store and refrigerate food, medication and breastmilk;
- Filter indoor air and regulate indoor temperatures;
- Power or charge electric or battery powered medical devices;
- Run pumps for water wells or septic systems;
- Access information (e.g., internet, telecommunications);
- Charge electric bikes or cars;
- Support critical facilities and shelters; and,
- Support air monitoring networks.

2 California Wildfires & COVID-19

Wildfire smoke contributing to poor air quality

- Particulate matter ≤ 2.5 microns in diameter (PM_{2.5}) is a primary constituent of wildfire smoke.
- Long-term exposure to PM_{2.5} increases risk of death from COVID-19 (1 $\mu\text{g}/\text{m}^3$ increase in PM_{2.5} exposure associated with an 8% increase in death rate from COVID-19) (Wu *et al.*, 2020).
- Exposure to particulate matter in wildfire smoke could exacerbate symptoms for existing COVID-19 cases.

Wildfire preparedness and response amid COVID-19

- Reductions in planned prescribed burn efforts given COVID-19 risk among firefighters.
- Adjusted firefighting, evacuation and emergency response protocols required to reduce risk of COVID-19.
- Potential competing demand for N95 respirators to reduce wildfire smoke exposure among general populations and to keep healthcare workers safe.

3 PSPS & COVID-19

Continuity of electricity supports those sheltering-in-place at home, critical facilities, and COVID-19 testing and medical care.

- While initial shelter-in-place orders have largely been lifted in California, many Californians remain at home while working from home and caring for children and family members. During previous PSPS events, populations traveled to areas with electricity; migrating populations may increase the risk of COVID-19 spread.
- Critical businesses and facilities require electricity to supply vital community services (e.g., grocery stores, medical facilities, utilities, public transportation). This includes supporting COVID-19-specific testing and medical care.

4 Wildfires, PSPS & COVID-19

Displacing populations seeking shelter and electricity

- Displaced populations due to wildfire or lack of power during PSPS may migrate and may increase the risk of COVID-19 spread.
- Interventions to promote health and safety during wildfires (e.g., clean air spaces, emergency shelters) are centralized public interventions that may increase risk of COVID-19 spread.

Air pollution from back-up energy sources

- Common residential and critical facility back-up power options include diesel generators, which emit health-damaging air pollutants and may contribute to poorer overall air quality.