ENVIRONMENTAL HEALTH TRUST

FACT SHEET: FEDERAL LEGISLATION ON WIRELESS COMMUNICATIONS

Wildfire Risks From Cell Tower Proliferation

Wireless Facilities Create Fire Risk

- Policymakers are looking for solutions to address the increasing severity and frequency of wildfires.[1]
- One proposal is to deploy wireless facilities in wilderness areas, together with cameras and remote sensors, to detect fires.[2]
- These plans do not take into account fire risk posed by wireless facilities.
  - Wireless facilities require electrical infrastructure, which carries fire risk. Wiring faults from ordinary wear and tear can create electrical arc temperatures up to 35,000°F,[3] like dropping a match in dry tinder.
  - Wireless facilities in remote areas are more difficult to reach and inspect as part of regular maintenance.
  - Wireless facilities emit radiofrequency (RF) radiation. No government agency has assessed the impact of RF exposure on flammability of vegetation.[4]
  - It remains unknown whether the fires prevented by such technology will exceed the fires caused by these deployments.

Bills Currently Pending

- Two bills in Congress promote the use of wireless facilities to prevent wildfires, HR 4235 and S.1764.[5]
- 17 other pending bills promote the deployment of wireless facilities on federal lands vulnerable to wildfires, including National Forests.[6]

Wireless Facilities Have Caused Damaging Fires

- The California Public Utilities Commission (CPUC) determined that the 2018 Woolsey fire, which caused an estimated $6 billion in damages, began after trees grew into a communications wire on a wooden utility pole.[7]
- In 2013, the CPUC fined the electric utility, AT&T, T-Mobile, and Verizon, a combined $99 million after three utility poles fell during heavy winds causing the Malibu Canyon Fire, which burned over 3,800 acres.[8]
- Electrical fires present secondary challenges for firefighters. Spraying water on an electrical fire before the electricity is cut may electrocute the firefighters,[9] therefore firefighters are advised to wait until the power is cut,[10] or use only short bursts of water, potentially delaying response time to fires.
- In addition to wildfires, wireless facilities have been documented as the cause of numerous fires in urban and suburban areas around the country, including on the East Coast in Ohio, Pennsylvania, and Virginia.[11]

References

[1] U.S. fires became larger, more frequent, and more widespread in the 2000s, Science Advances, 2022 https://www.science.org/doi/10.1126/sciadv.abc0020

[2] How California is using AI to snuff out wildfires before they explode, CNN, September 23, 2023 https://www.cnn.com/2023/09/23/us/fighting-wildfire-with-ai-california-climate/index.html https://www.cnn.com/videos/weather/2023/09/25/elam-california-fires-a-i-technology.cnn T-Mobile for Business TV Spot, 'Pano AI: Innovate', June 8, 2023 https://www.ispot.tv/ad/1WHK/t-mobile-for-business-pano-ai-innovate

[3] Arc Flash Safety Hazards, Canadian Centre for Occupational Health and Safety https://www.ccohs.ca/oshanswers/safety_haz/arc_flash.html

[4] RF emissions have been documented to increase terpene content in plants, and to alter the types of terpenes in plants. "Influence of microwave frequency electromagnetic radiation on terpene emission and content in aromatic plants." Journal of Plant Physiology, 2015. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4410321/ Terpene content has been shown to affect the flammability of vegetation. "How terpene content affects fuel flammability of wildland–urban interface vegetation." https://doi.org/10.1071/WF18210 "The relationship between terpenes and flammability of leaf litter." https://doi.org/10.1016/j.foreco.2008.09.019 RF has also been shown to increase drying rates of certain vegetation. The impact of these findings on flammability of vegetation remains uninvestigated. Radio frequency treatment accelerates drying rates and improves vigor of corn seeds, Food Chemistry, 2020. https://pubmed.ncbi.nlm.nih.gov/32187567/

[5] For further description see https://ehtrust.org/congress/

[6] Ibid.

[7] Investigation Report of the Woolsey Fire, California Public Utilities Commission https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/investigations-wildfires/sed-investigation-report---woolsey-fire---redacted.pdf

[8] See page 8, Settlement Agreement Regarding the Malibu Canyon Fire, 2013 https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M077/K305/77305250.PDF

[9] https://firefighternow.com/can-you-use-water-on-an-electrical-fire/

[10] Phoenix Fire Department https://www.phoenix.gov/firesite/Documents/074807.pdf

[11] https://ehtrust.org/cell-tower-safety-risks-fires-and-collapse/ See PDF pages 153-182, Protecting LA County's Future: How Fire Risks from Telecommunications Equipment, Climate Challenges, & a Dangerous Shift Away from Environmental Review Threaten Los Angeles County's Future, 2022 https://file.lacounty.gov/SDSInter/bos/supdocs/175337.pdf