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Humans are the cause of most wildfires. Climate change will make that worse Zack Budryk, The Hill

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Climate change is exacerbating wildfire dangers across the West, creating the perfect conditions for the main culprits to start damaging fires: human beings.

People are the driving force behind the changing climate, and they are also the driving force behind most fires.

Data from the National Interagency Coordination Center indicates that the vast majority of wildfires, 88 percent on average, were ignited by human sources from 2016 to 2020.

As recently as last week, utility Pacific Gas and Electric (PG&E) said in a disclosure to the California Public Utilities Commission that it believes its equipment was connected to the ignition of the Dixie Fire, which has reached 40,500 acres as of Wednesday.

Fires are also regularly started by people going about their lives.

In one of the more unusual cases, a couple on Tuesday was charged with involuntary manslaughter after their gender reveal party ignited a 2020 wildfire in San Bernardino County, leading to the death of a firefighter.

The year before, officials from the California Department of Forestry and Fire Protection (Cal Fire) determined that the October 2019 Kincade Fire was caused by downed PG&E transmission lines. The Sonoma County fire displaced nearly 100,000 people and burned 374 homes.

A 2018 report by the California State Senate Energy Committee determined electrical power was the thirdmost common cause of wildfires in the state, ahead of arson, lightning and campfires.

Statistics from Cal Fire further indicate that of the 20 deadliest wildfires in state history, at least 10 were human-caused, whether through power lines, vehicles, arson or other unspecified human causes. The 2018 Camp Fire, the deadliest in the state's history, began that November as a result of a power line malfunction. At least 10 of the most destructive fires on record in the state were also human-related.

While individual human error is often a major factor in ignition, often the root causes come back to institutional problems, whether due to inaction on climate change or issues with electrical infrastructure.

In California, the utilities' infrastructure runs through highly flammable areas.

"There's just no question about that because we bring electricity long distance into the urbanized areas," said Stephanie Pincetl, a professor in residence at the UCLA Institute of the Environment and Sustainability. "So the more that that electricity goes through highly burnable areas — we're not really maintaining the corridors well — the likelihood of fires being ignited increases."

Pincetl added that aging infrastructure is not the sole factor in California wildfires but has accompanied other forms of institutional neglect such as the lack of sufficient controlled burns over the past century.

"And so, when you have an aging infrastructure running through forested areas that haven't been maintained themselves, the chances of that ignition occurring is much, much higher," she said. "And it's not up to the utilities to really manage forest health by doing controlled burns for the forest. So it's an infrastructure that is embedded in a larger system that itself hasn't been very well managed."

Human-ignited fires can be vital for conservation in the case of controlled burns, and they occurred throughout the western U.S. before European colonization, noted Sean Parks, a research ecologist with the U.S. Forest Service.

"It's when they occur near cities or when they occur in high winds or in situations where the forests are really thick" that they become a problem, Parks said.

The reason so many recent human-caused blazes have spread out of control, he added, is "because they're often in proximity to human infrastructure and communities and what have you."

As human infrastructure represents more and more of the western landscape, the coexistence with fire that was once the status quo becomes more difficult, Parks added.

Fires ignited through human activity can also be easier to start and harder to extinguish based on environmental factors such as temperature and dryness of vegetation.

"When stuff is dry, it will burn more easily regardless of how it is ignited," bioclimatologist Park Williams, an associate professor of geography at UCLA, told The Hill. "Drought conditions are generally not direct causes of ignitions, but they do greatly enhance the probability that a given ignition leads to a large wildfire."

Although it is difficult to determine direct causation, both increased heat and more extreme weather due to climate change increase the risk from human-ignited fires.

"While it hasn't gotten as much study, it would also appear that there's an increase in the number of red-flag days, or the number of days affected by high-wind incidents," according to Sabrina Drill, the natural resources adviser for University of California Cooperative Extension in Los Angeles and Ventura counties.

These conditions can be particularly dangerous in Southern California, where the majority of fires are driven by drifting embers, she added. In addition to spreading individual fires, she noted, high winds can increase the rate at which moisture in vegetation evaporates. The couple whose gender reveal ignited the San Bernardino County fire were unable to extinguish it with water bottles due to the high winds present at the site.

"That's also why during big wind events we have a lot of these power companies actually shutting power off," said Max Moritz, a cooperative extension wildfire specialist at the Bren School, UC Santa Barbara.

his season in particular, Moritz said, has seen a potent combination of lack of rain and heat waves. The result is both a low starting point for vegetative moisture and high evaporative demand, or the extent to which the environment works to evaporate water.

As a result, "we just got fires igniting more easily, all things considered," he said.

"One of the things that happens with increasing temperatures due to greenhouse gases and all these other conditions is that there's just more energy in the environment," Drill said. "That's why we worry more about extreme events and things like superstorms and tornadoes becoming more common. The same thing [applies] in fire conditions."

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https://thehill.com/policy/energy-environment/564399-humans-are-the-cause-of-most-wildfires-climate-change-will-make

Record drought in Western U.S. means elevated fire risk in Southern California CA Martin Wisckol, Orange County Register

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A single sunflower overlooking fallowed fields at Del Bosque Farms in Firebaugh, Calif. June 16, 2021. The state's drought emergency now encompasses 50 of the state's 58 counties. Southern California has not been included, the lack of rain has firefighters on alert for a busy wildfire season. (Mike Kai Chen/The New York Times)

While Southern California has been spared the worst impacts of the drought so far this year, the region's vulnerability to wildfires and water shortages is expected to grow in the coming months — and decades.

The Western United States is experiencing its most extensive drought on record, with 89% of the region in a drought and 57% getting an "extreme" or "exceptional" designation from the National Integrated Drought Information System, a multi-agency entity led by NOAA, the National Oceanic and Atmospheric Administration.

All of California is listed as having a drought, with the conditions driving an early rash of wildfires. As of July 11, the state recorded 142,000 acres burned, mostly in northern California, compared with 39,000 acres at the same point of last year's record-breaking wildfire season. The drought officially began in July of 2020, and the 12 months since have been the second driest and fourth warmest on record.

Southern California hasn't seen the dramatic blazes of northern California this year, but 2020 was a reminder of how susceptible the region is. The Bobcat Fire, which started last September in the San Gabriel Mountains, burned 116,000 acres, and five other fires in the greater Los Angeles area last year each burned more than 10,000 acres.

'Sublime' at 25: Remembering Bradley Nowell and the Long Beach band's massive hit album The dry, hot weather conditions abetting fire danger are likely to grow steadily worse for Southern California and much of the West, while also shrinking the imported water supplies Southern California depends on.

"High temperatures are projected to worsen the intensity, duration and frequency of drought over the coming decades in the Western U.S.," said NOAA Administrator Rick Spinrad at a Wednesday, July 20, webinar on the Western U.S. drought, hosted by the drought information program.

In the more immediate future, the chance of a dry La Nina weather pattern emerging through the winter is twice as high as usual, which would likely mean less rain than normal for much of California, said Jon Gottschalck of NOAA's Climate Prediction Center. If that happens it would continue a two-decade trend of below average rains — a trend that has also included hotter than average temperatures.

Fire, water threats

The elevated risk of fire will continue for much of the West through September, said Nick Nausler, a meteorologist with the Bureau of Land Management. That risk extends to all of Los Angeles and Orange counties and parts of Riverside and San Bernardino counties, which are expected to see that higher threat continue through October.

Nausler noted that dry conditions in wildlands are arriving ahead of schedule, contributing the risk of wildfires, and that Southern California's Santa Ana winds in the fall could help blazes spread rapidly.

When it comes to water supplies, Southern California should fare well until at least next year, according Demetri Polyzos of the Metropolitan Water District of Southern California, which manages water imported from northern California and the Colorado River.

While Gov. Gavin Newsom has declared a drought emergency for 50 of the state's 58 counties, the six Southern California counties served by the Metropolitan Water District have been excluded.

Major reservoirs elsewhere in the state are well below average levels, but Polyzos said his district began the year with more stored water than ever. That's been credited to the district's aggressive program to increase reservoir and aquifer capacity over the past 30 years, and to conservation efforts.

"We'll be able to handle this year," he said. "But what we're worried about is the next year or two years if this continues."

So even though Southern California has not been included in Newsom's state of emergency, the water district is once again gearing up conservation and outreach programs.

"We understand where the rest of the state is and what the next year or two could mean," Polyzos said. "We're trying to stretch our supply."

https://www.sbsun.com/2021/07/20/record-drought-in-western-u-s-means-elevated-fire-risk-in-southern-california/

Rain Falls Across Southland, Sparks Risk of Flash Flooding In Burn Areas Staff Writer, CBSLA Staff

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MONROVIA (CBSLA) – Many Angelenos woke up to unusual summer rainfall Monday, as forecasters warned of the risk of flash flooding throughout the day across the Southland, especially in burn areas.

A flash flood watch was in effect through 8 p.m. Monday for Los Angeles County mountain areas including Lancaster, El Monte, East Los Angeles, Topatopa Peak, Reyes Peak, West Covina, Alhambra, Falling Springs, Pasadena, Pomona, Palmdale and Whittier.

Excluded from the flood watch was the Santa Monica Mountains, the San Gabriel Valley and the Ventura County Mountains.

"Scattered showers and thunderstorms, some capable of producing heavy downpours with rainfall rates up to an inch per hour are possible," the National Weather Service wrote.

A storm cell moving through the region could bring heavy rain that causes flash flooding and debris flows in burn areas, the NWS said, including the burn scars of the Bobcat Fire in the Antelope Valley foothills, the Dam Fire in the Angeles National Forest north of Azusa, the arson-sparked Ranch Fire north of Azusa and the Lake Fire near Lake Hughes.

There's also the risk of flash flooding for neighborhoods below the El Dorado Fire burn scar in Yucaipa in San Bernardino County. Evacuation warnings were issued by Cal Fire from 8 a.m. to 8 p.m. Monday.

Meanwhile, downtown L.A. Monday shattered a daily record for rainfall on this date. So far, it has received 0.12 inches of rain, breaking the daily record of 0.04 inches set back on this day in 2013.

So far this month, Downtown L.A. has received 0.22 inches or rain, making it the third wettest July since records began 1877, CBS2 Meteorologist Amber Lee reports.

The wettest July occurred in 2015, when downtown L.A. received 0.38 inches of rain. The second wettest July was 1886, with 0.24 inches.

https://losangeles.cbslocal.com/2021/07/26/rain-falls-across-southland-sparking-risk-of-flash-flooding-inburn-areas/