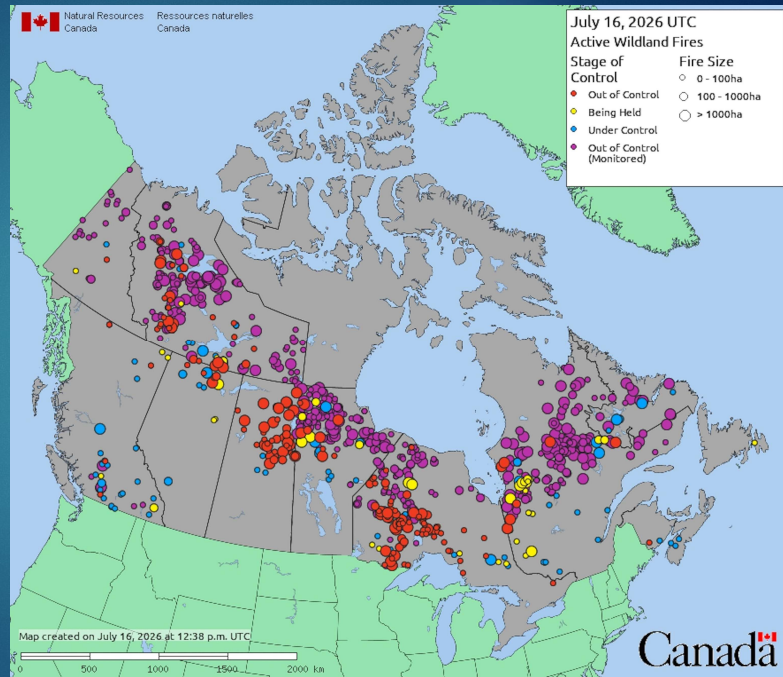




Canada Wildfires

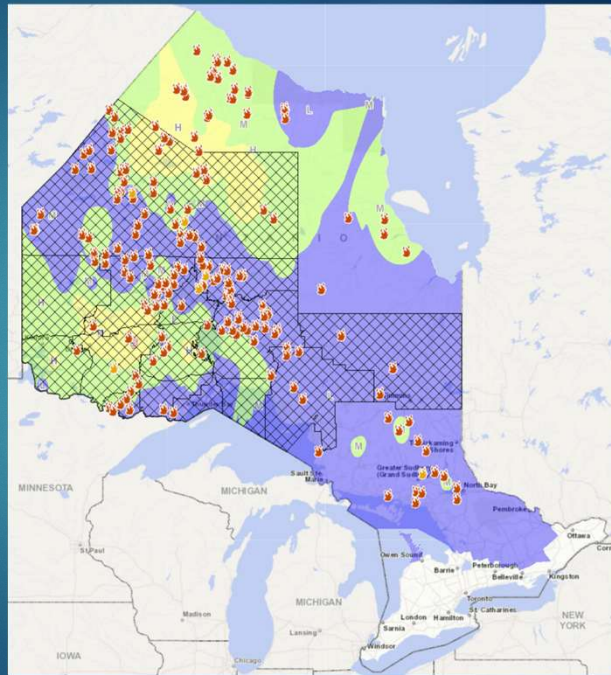
July 2026



Canada
Wildfires

Ontario

18 July 2026



Where's the Fire(s)?

- ▶ The wildfires causing the smoke are all over Canada at this point
- ▶ Some of the fires had been burning since June, with one fire near Collins burning since May (130 miles north of Thunder Bay)
- ▶ There was a significant outbreak of fires during July 8-12, corresponding with hot, dry weather and likely lightning strikes
- ▶ July 13 & 14 saw rapid expansion of existing fires and the start of new ones
- ▶ By now, there are 800-970 active wildfires, with over 180 in Ontario alone
- ▶ 50-100 of the total are close enough to human settlements to necessitate evacuation
- ▶ Most of the active wildfires, about 85-95%, are in remote wilderness and boreal forest areas, far away from human settlements

- ▶ Smoke from the fires extends southeast, covering southern Ontario, and much of the US northeast, impacting many major cities

Extent of Wildfire Smoke



Why So Much Fire?

- ▶ The direct cause of the wildfires is hot and dry weather drying out fuel for the fires
- ▶ But the available fuel for the fires is exacerbated by aggressive fire suppression and allowing fuel to accumulate
- ▶ Lightning strikes are the most likely cause of most remote fires
- ▶ Fires near human settlements are typically attributable to accident or negligence, contributing 20-40% of all wildfires
- ▶ Arson also contributes, to the tune of 5-10% of human-caused fires (around 2% of all fires)
- ▶ Many posts on X point at the federal government's mishandling as the reason behind this year's flare-up

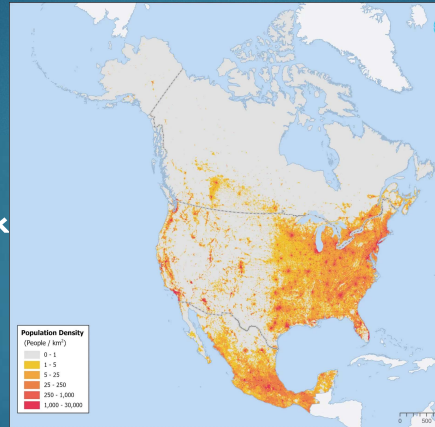
How Wildfires Spread

- ▶ Wildfires spread through several means
- ▶ Embers are carried downwind, which can spread existing fires and ignite new ones
- ▶ Large fires create new weather systems (called pyrocumulonimbus) which themselves emit lightning strikes, increasing the potential for new fires
- ▶ They also heat and dry out the air, which further dry out fuel downwind

Why Are the Fires Still Going?

- ▶ Once a wildfire gets going, it is very difficult to contain and extinguish
- ▶ Many of the fires in Canada are in very remote areas without roads
- ▶ Crews have to be flown in via helicopter
- ▶ Aerial fire suppression is only part of the equation
- ▶ Marshy areas make it difficult to move heavy equipment in the summer
- ▶ A single wildfire can take weeks to contain, much less extinguish

Population & Forest Coverage in North America



Canada has about 9000x times more trees than people, and most of that forest is very far away from major population centers.

What Are the Costs of Wildfire?

- ▶ Insured losses include property damage, interruption to business, and some evacuation expenses: about \$3.1 billion nationally in 2023
- ▶ Total government spending, including evacuations, emergency services, and initial recovery cost \$1.1 billion in Quebec alone in 2023
 - ▶ Fire suppression alone was about \$210 million of this figure
 - ▶ 232,000 people were evacuated across 282 events
- ▶ Healthcare impacts, again from Quebec: \$585 million in extra ER visits, hospitalizations, and related burdens
- ▶ Some sources estimate fires cost Quebec alone up to 8 billion in 2023

Wildfire Definitions

- ▶ Hectare – an area of land equating to 0.01 square kilometers
 - ▶ Just shy of 2.5 acres
 - ▶ Around 2 American football fields
 - ▶ Roughly the size of a professional soccer pitch
 - ▶ Enough space to park 150-200 cars
- ▶ Boreal forest – the vast northern forest belt across Canada
 - ▶ Contains conifer trees like spruce, pine, and fir
 - ▶ Contains deciduous hardwoods like aspen, birch, and balsam poplar
 - ▶ In peatlands and bogs, contains moss, sedges, and low shrubs
 - ▶ In open areas and wetlands, contains grasses and sedges
 - ▶ Boreal forests are highly adapted to fire
 - ▶ The Canadian boreal forest totals 526 million hectares

NEWS FLASH

Government Mismanages Wildfires

- ▶ In 2021, Justin Trudeau promised \$450 million for new water bombers before the next season
- ▶ A single water bomber costs \$80-85 million
- ▶ From 2020-2026, the size of the water bomber fleet nationwide remained at 64
- ▶ Ontario itself has only 9, with other provinces lending aid
- ▶ Experts, reports, and past fires all informed the government that dead wood needed to be cleared and forests needed to be managed
- ▶ Previous fires include:
 - ▶ 2016 – Fort McMurray – 589,552 hectares
 - ▶ 2017-2018 – Record BC Fire Seasons
 - ▶ 1,216,053 hectares in 2017
 - ▶ 1,351,314 hectares in 2018
 - ▶ 2021 – Lytton destroyed with 83,740 hectares burned
 - ▶ 2023 – Worst wildfire season in Canadian history
 - ▶ 15-17.2 million hectares
 - ▶ 2025 – Second worst on record, with mass evacuations
 - ▶ 8.3-8.9 million hectares

Where Did the Money Go?

- ▶ Given the broken promises, where did money end up going?
- ▶ \$29 billion in total of Canadian taxpayer money went to Ukraine
- ▶ 2024-2025, the government sent \$500 million to Palestinian causes
- ▶ \$2.65 billion sent in 2022 to international climate finance to developing countries
- ▶ About \$1 billion per year from 2021-2024 earmarked for grants to immigrant and refugee resettlement and citizenship programs
- ▶ With just the figures listed here, that's 705 water bombers
- ▶ Instead of fighting literal fires at home, Canada played its part in lighting larger civilizational fires around the world by contributing to war, immigration, climate change, and so on...
- ▶ Cue Jordan Peterson: "clean your room!"

How Does One Manage Wildfires?

- ▶ At the risk of stating the obvious: without human beings, wildfires would happen
- ▶ Humans, of course, do not want fires
- ▶ Humans also extract resources such as lumber, which disrupts the existing ecosystem
- ▶ However, species in forests evolved to cope with burn/regrowth cycles
- ▶ Hence, an effective way to manage wildfires is to perform prescribed burns
- ▶ This involves sending crews and equipment to intentionally set fires, which clears out deadwood and simulates the natural cycle
- ▶ It's worth noting that aggressive fire suppression has been known to exacerbate the problem of wildfires since the 1930s – almost 100 years!

Canada's Wildfire Bungling

- ▶ Canada makes performing prescribed burns an onerous process, to the point that in 2023, the worst wildfire season in recorded history, only 8 prescribed burns covering 532 hectares were conducted by Parks Canada, the federal authority
 - ▶ BC conducted 23 burns, covering 2,241 hectares
 - ▶ Alberta only released the area, with burns covering 1,374 hectares
 - ▶ Other provinces haven't released public figures, but based on available data from local authorities, which only account for a few hectares per burn, we estimate this is likely 200-800 hectares across the rest of Canada
 - ▶ This makes the national total for 2023 somewhere between 4350-4950 hectares burned
- ▶ Bob Grey, a BC-based fire ecologist, says that Canada should perform prescribed burns of tens of thousands to the low hundreds of thousands of forest every year to make any real dent in fuel loads and future wildfire behavior
- ▶ BC alone used to burn over 100,000 hectares historically; now, they burn less than 10k per year
- ▶ Wildfires consume multiple millions of hectares in the worst seasons

It is worth noting that the 2023 season would have made it difficult to conduct prescribed burns, but as we mentioned before, the decades of oversuppression and utter neglect, including obstacles to performing prescribed burns, is what contributed directly to the 2023 season being so dangerous in the first place. So, it's fair to assume this would have been a lighter year for prescribed burns to begin with.

In the other provinces, the burns were conducted by conservation authorities and municipal prairie burns in Ontario, limited training or park burns in Saskatchewan, and occasional indigenous cultural burns.

Of the prescribed burns in 2023, there was one that escaped containment, conducted by Parks Canada near Banff, but it did not rise to the level of a wildfire. It burned 3 unplanned hectares, for a total of 21 hectares burned. So, the prescribed burns themselves did not contribute to the 2023 wildfire season.

What If We Just... Burned It All?

- ▶ From Prof. Ryan Katz-Rosene on X:
 - ▶ A prescribed burn costs between \$1 500-\$8000 per hectare. There are 526 million hectares of boreal forest. If we prescribe burn 5% of the forest each year (representing a 20-year fire return rate) it would cost between \$39.5 Billion and \$210.4 Billion PER YEAR. So, up to 36% of Canada's total ANNUAL budget.
- ▶ This is a strawman – one problem here is the government's ownership of the forests (over 90%), which bans private enterprise from finding the best solution to deal with it
- ▶ Another problem is that not all of the forest would need to be managed in this way – fires remote from human settlements could be allowed to burn naturally with relatively little impact to people
- ▶ Jan Beverly from the University of Alberta testified in 2024 regarding communities with extreme fire exposure
 - ▶ She identified 149 million hectares with extreme fire exposure
 - ▶ 65 million hectares of that area was within long-term tenure areas
 - ▶ Narrowing that down to where people actually live, she reported that they'd still need to treat 4 million hectares with FireSmart treatments
- ▶ Natural fire return rates range from 50-500 years, so 5% is quite aggressive
- ▶ The cost also combines private and public burns into a single range

The 65 million hectares in Jan Beverly's testimony is already partially managed as 1% of that area is harvested per year. It would also contain roads for access.

FireSmart is a Canadian government advisory program that prescribes how to mitigate wildfire risk within human settlements. It typically includes:

- Vegetation management: clearing flammable plants, thinning trees, creating fuel breaks
- Home and structure hardening: non-combustible roofing, screening vents
- Community planning and education
- Emergency planning
- Interagency cooperation

Private Burns vs Public Burns

- ▶ How much would it cost if private enterprise took over wildfire management?
- ▶ Unfortunately, the \$1,500-\$8,000 per hectare range is the only data we have on burns in Canada
 - ▶ Private vs public ranges are not separated out in any publicly available data
- ▶ The US has even less private boreal land ownership, but we can look at some of the costs there
- ▶ Boreal forests in the contiguous 48 states is limited to Minnesota, Wisconsin, and Michigan
 - ▶ Private forest ownership is relatively high in these states, but boreal forest only occupies the northern portions of these states and is mostly owned by state and federal governments
- ▶ Costs for prescribed burns are not broken out according to forest type
 - ▶ A small 2022 survey in Wisconsin revealed a rate of \$508 per acre for all types of forest, or \$1,255 per hectare. This rate contained both public and private respondents, and was heavily weighted towards private consultants and family forest owners
- ▶ Alaska is covered in boreal forest and is almost entirely publicly owned. They can conduct burns at \$50 per acre, or \$123 per hectare
 - ▶ Alaskan burns can often be ignited via airdrops, and require minimal ground crews

It's worth noting that there are other kinds of burns performed in the US, with lower costs per acre, but these burns are on prairies or non-boreal forests. We're focusing on boreal forest costs here since that is what's relevant to Canadian wildfire management.

How Much Would It Cost to Burn Privately?

- ▶ Boreal forest is overwhelmingly held by the provincial governments, between 87-92%
- ▶ The federal government holds 4-7%
- ▶ Private land is 3-6%
- ▶ Indigenous land, owned or co-managed: 2-5%
- ▶ If we take the highest rate from the US, \$1,255 per hectare for joint private/public burns, and translate that to CAD, we get \$1760 per hectare
- ▶ This means that US practices with mixed private and public efforts are only slightly over the low end of Canada's burn range – fascinating!
- ▶ The GDP of Canada attributable to the private sector is about \$1.8 trillion – no government budget allocation needed!
- ▶ Using Professor Ryan's assumptions, let's just say that the high end for private enterprise would be \$46.3 billion per year, or about 2.5% of private production
- ▶ If we consider Jan Beverly's testimony and say that all 61 million hectares that sit between remote forests and human settlements need to be managed at 5% per year, the total cost comes to \$5.7 billion, or 0.3% of private production

Exact figures vary depending on how “boreal forest” is defined – different agencies use different definitions.

Some land is in transition due to modern treaties and indigenous land claims.

GDP does include government “production,” so we don’t really want to count that if we are considering how much it would cost the private sector to handle wildfire management. Private enterprise contribution to GDP for Canada is estimated at 82-85% of GDP.

We arrived at 61 million hectares by subtracting 4 million from the 65 million cited in Jan Beverly’s Senate testimony.

There is also the thing to consider that many of the remote settlements are heavily subsidized by the government. Many of them would not exist without the social programs propping them up. Take away those social programs, and people would move away, which would further mitigate wildfire risk to human settlements, making wildfire management much easier.

US Assistance

- ▶ Elected officials in America are calling for Canada to do more to manage its wildfires
- ▶ Mark Carney turns that around on the US, blaming America for being a primary contributor to climate change
- ▶ We will get to climate change in a bit, but it's worth noting that Canada has sent billions of dollars overseas, and has had plenty of warning about the dangers in their forests
- ▶ In response to US elected officials, Doug Ford in Toronto said, "Rather than complain, send support." Well... let's get into that, shall we?

Firefighter Reciprocity Gaps

- ▶ There is a lack of reciprocity on the part of the Canadian government when it comes to American assistance
- ▶ When Canadian firefighters come to the US, the base daily rate is \$400-800 per day, plus overtime and hazard pay
 - ▶ Canadian firefighters earn 30-70% more in the US when compared to home rates
 - ▶ For example, Alberta & BC crews have reported effective daily compensation of \$900-1200 USD
- ▶ When US firefighters come to Canada, they are sometimes not reimbursed, or only receive a minimal stipend
 - ▶ Most US crews are paid their home pay rate
 - ▶ "Pay" is typically a per diem of \$50-100 CAD for meals plus travel reimbursement
 - ▶ The net: 70-100% less compensation compared to US rates; US firefighters essentially volunteer their time or are covered by home pay while away

Climate Change?

- ▶ The mainstream attributes the hot and dry conditions that exacerbate the danger of fire to CLIMATE CHANGE
- ▶ Now, if politicians actually believed climate change was real, they would take steps to mitigate the effects, such as performing prescribed burns
- ▶ But they fund projects like airports in low-lying areas, they oppose nuclear power, they block domestic energy production, and so on
- ▶ And of course, personally, politicians and other such mouthpieces are happy to do things like buy seaside mansions, own large, energy-intensive homes, fly private jets all around the world... alas, it's rules for thee, not for me

But Is It Climate Change?

- ▶ It used to be “global cooling,” then it changed to “global warming,” and now it’s “climate change”
- ▶ The truth is that hot days and drought have not increased in Canada since 1910; wildfires are driven primarily by aggressive fire suppression and the accumulation of fuel
 - ▶ The United States has had a similar problem
- ▶ Globally, wildfire rates have decreased by 24% over the past two decades, and even Canada’s 2026 wildfire season is below the five-year average
- ▶ There were more fires in Canada and the USA in the Little Ice Age (1300-1850) than today
- ▶ Every continent is below average in terms of wildfire

Carbon Dioxide

- ▶ While it is true that carbon dioxide is a fire suppressant, atmospheric concentration doesn't have much effect on wildfires
- ▶ If anything, increased carbon dioxide may have an increased effect on wildfires due to the more abundant presence of plant food!
- ▶ Even so, the mainstream complaints about "climate change" are a smokescreen to distract people from what's really going on

Wildfire and Emissions

- ▶ Fires release CO₂, carbon monoxide, fine particulates, VOCs, formaldehyde, benzene, and so on
- ▶ Health effects include irritation, respiratory and cardiovascular strain
- ▶ Total emissions of fires in 2023 was ~2.4 gigatons of CO₂, several times Canada's annual emissions from fossil fuels
- ▶ The 2026 fires are serious regionally, but haven't reached the scale of 2023, and the claim that the 2026 fires exceed all emissions of the 300 years of US emissions is off by more than 200x

Were the Fires Started By Humans?

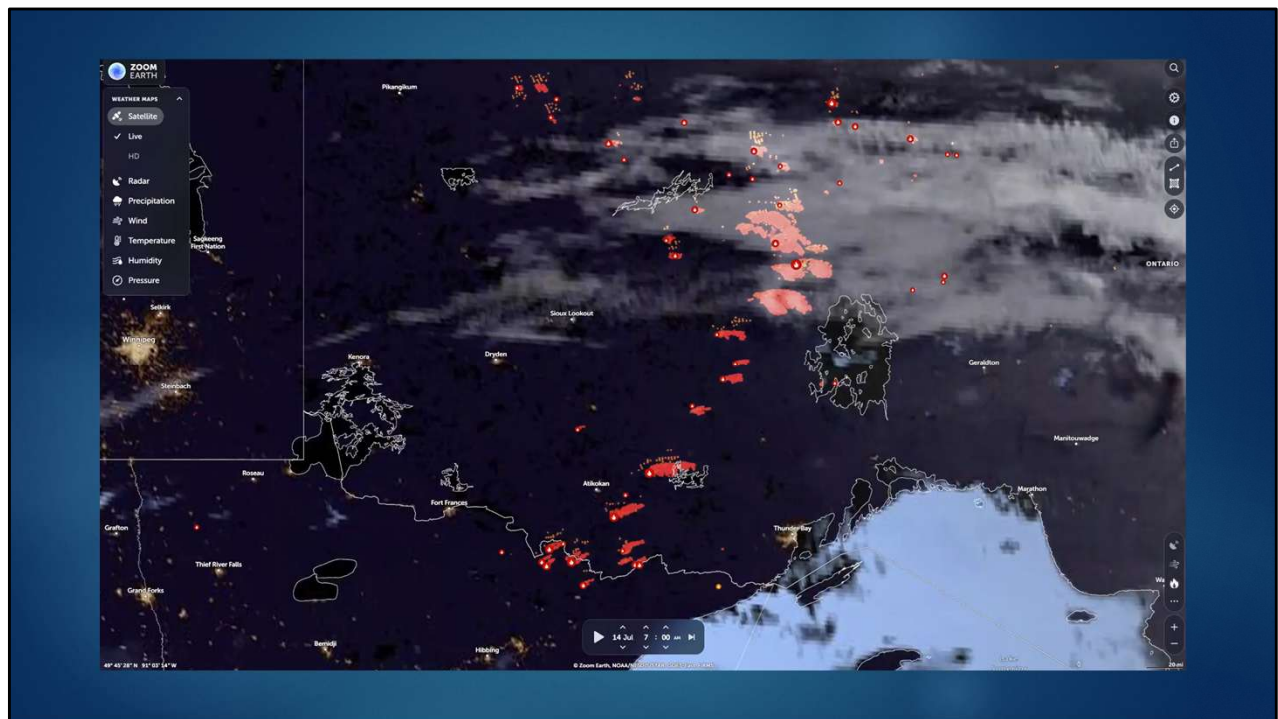
- ▶ There have been discussions on X around how the fires seemingly start in a straight line all at the same time
- ▶ We found the satellite imagery being referenced on <https://zoom.earth/>
- ▶ At the time of this writing, the imagery goes back to July 9. Many fires are already smoldering, and you can see relatively thin smoke plumes coming from them
- ▶ On July 13, around 1:30pm EDT, the smoke plumes start to intensify
- ▶ This is a common occurrence with wildfires
- ▶ The heat of the sun will cause fires to intensify
- ▶ The forecast around Thunder Bay on July 13 was around 100°F, with low humidity, with mild to moderate wind
- ▶ The result was heavy plumes through to sunset
- ▶ When you see alarming things online, take a minute to ask, what's going on?

The next two slides show time-lapsed satellite imagery on July 13 and July 14. The images are taken 10 minutes apart. Pay attention to the time of day, and notice on the 14th that the plumes have significantly abated overnight.

These animations also include markers for the fires, as well as heat maps. The heat maps are updated periodically, so you can see an update to those heat maps on July 14.



The time in the video is EDT (Toronto time). We start at 7am on July 13, and you can see the smoke plumes, most clearly in the south. As the sun rises and heats the earth, you can see that the plumes start to grow in intensity between 1-2pm. This is not “fires starting,” this is wildfires reacting to the conditions at the time, which were highs around 102°F (39°C), low humidity, and sustained westerly/southwesterly winds.



The time in the video is EDT (Toronto time). We start at 7am on July 14, and you can see that the plumes have diminished overnight. They again increase in intensity around 12pm. The high for the day is still quite hot, around 95°F (35°C), low humidity, and sustained westerly/northwesterly winds.

Glyphosate Spraying?

- ▶ Glyphosate was developed by Monsanto in the 1970s, and was approved by the Canadian government in 1984
- ▶ It is used in forestry to suppress broadleaf & deciduous vegetation, allowing conifers like spruce, pine, and fir to grow uncontested
- ▶ It is sprayed 1-2 times per 25-50 year rotation, a few years after harvest
- ▶ Critics say that spraying reduces fire-resistant species such as aspen, and promotes flammable conifer monocultures. It also leaves dry/dead biomass, which serves as kindling for fires
- ▶ Quebec banned glyphosate in 2001, and yet, Quebec sees just as much fire despite the ban

Pronunciation: Glyphosate – GLY-fuh-sate

Health Concerns

- ▶ On X, there is skepticism about the smell of smoke from the wildfires, with one user saying
 - ▶ Legacy Media trying to justify why the air in Canada smells & tastes of Chemicals - no mention of the 5 years + of daily Geo-Engineering spraying.
- ▶ Wildfire smoke does contain low concentrations of benzene, toluene, formaldehyde, and acrolein, which contribute to the sharp “chemical” or plastic smell
 - ▶ It's not enough to cause long term harm, but they certainly cause irritation, headaches, and dizziness
- ▶ Nitrogen oxides and burned plant resins contribute to bitter and acid taste
- ▶ Authorities have given us little to trust in, but these are normal for wildfires

Here are the details on how the chemicals listed in the second bullet point are formed.

All of these are the result of incomplete combustion. As a wildfire burns, oxygen is consumed rapidly. When oxygen is low, the biomass burns incompletely, which contributes to the formation of these chemicals:

- Benzene is from the incomplete combustion of cellulose, lignin, and other plant materials. It is also formed from the thermal breakdown of aromatic compounds in wood and vegetation.
- Toluene is similar to benzene, especially materials that contain aromatic rings.
- Formaldehyde is produced during the incomplete oxidation of a wide range of organic compounds, including cellulose, hemicellulose, sugars, and so on, as vegetation burns. It is one of the most common carbonyl compounds in smoke.
- Acrolein is formed from the incomplete combustion or thermal decomposition of fats, oils, and other organic matter in plants. It is a highly reactive aldehyde commonly detected in biomass smoke.

Fortunately, the concentrations of these chemicals is low, especially when compared to industrial exposure. They can cause eye and respiratory irritation, and contribute to mild headaches and dizziness, but the concentrations in wildfire smoke, as well as the duration of wildfires, mean that the long-term exposure risks of these chemicals is

negligible.

Firefighters and other crews working on the front lines are at much higher risk of exposure to these compounds, especially since they are more likely to face issues from chronic exposure as well.

The risks of chronic exposure:

- Benzene and formaldehyde are carcinogenic
- Toluene can cause neurological damage
- Acrolein can cause respiratory damage

PM2.5 Air Quality Questions

- ▶ In reference to an air quality map in Michigan, Steve Milly on X writes
 - ▶ These are NOT "unhealthy" levels of PM2.5. If you inhaled the highest level on this map—262 micrograms per cubic meter—all day (24 hours), it would be equivalent to the PM2.5 from about two drags on a cigarette. Not harmful. No panic warranted.
- ▶ It's fair to say you shouldn't panic, but it doesn't mean you shouldn't take caution
- ▶ Normal healthy people experience respiratory irritation due to wildfire smoke, which is an indication you should avoid breathing it in if you can, especially vulnerable individuals
- ▶ Chronic exposure to elevated PM2.5 is linked to respiratory issues, but temporary exposure to PM2.5 from a wildfire is also not the same as smoking or living in a polluted city

What Is the Solution?

- ▶ Freedom! Freedom! Always and forever, freedom!
- ▶ Wildfires are going to happen, and they're a complex problem requiring a lot of coordination
- ▶ The vast majority of wildfires occur on government-owned land
- ▶ The government erects all kinds of barriers to sensible management
- ▶ Governments adapt slowly, if at all. For example, they're frozen in time with regards to aggressive fire suppression

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Thank You!