

The Spring 2023 Wildfires:

What Needs to Change?



By Devon Earl

At the time of writing this article, it's only mid-May 2023, and Calgary is choked in a thick blanket of wildfire smoke, making the sky look an apocalyptic orange colour. Temperatures soared into the 30s at the beginning of the month, which is more typical of mid-summer than spring. The accompanying low precipitation and high winds created dangerous conditions and an abrupt start to wildfire season in western Canada.

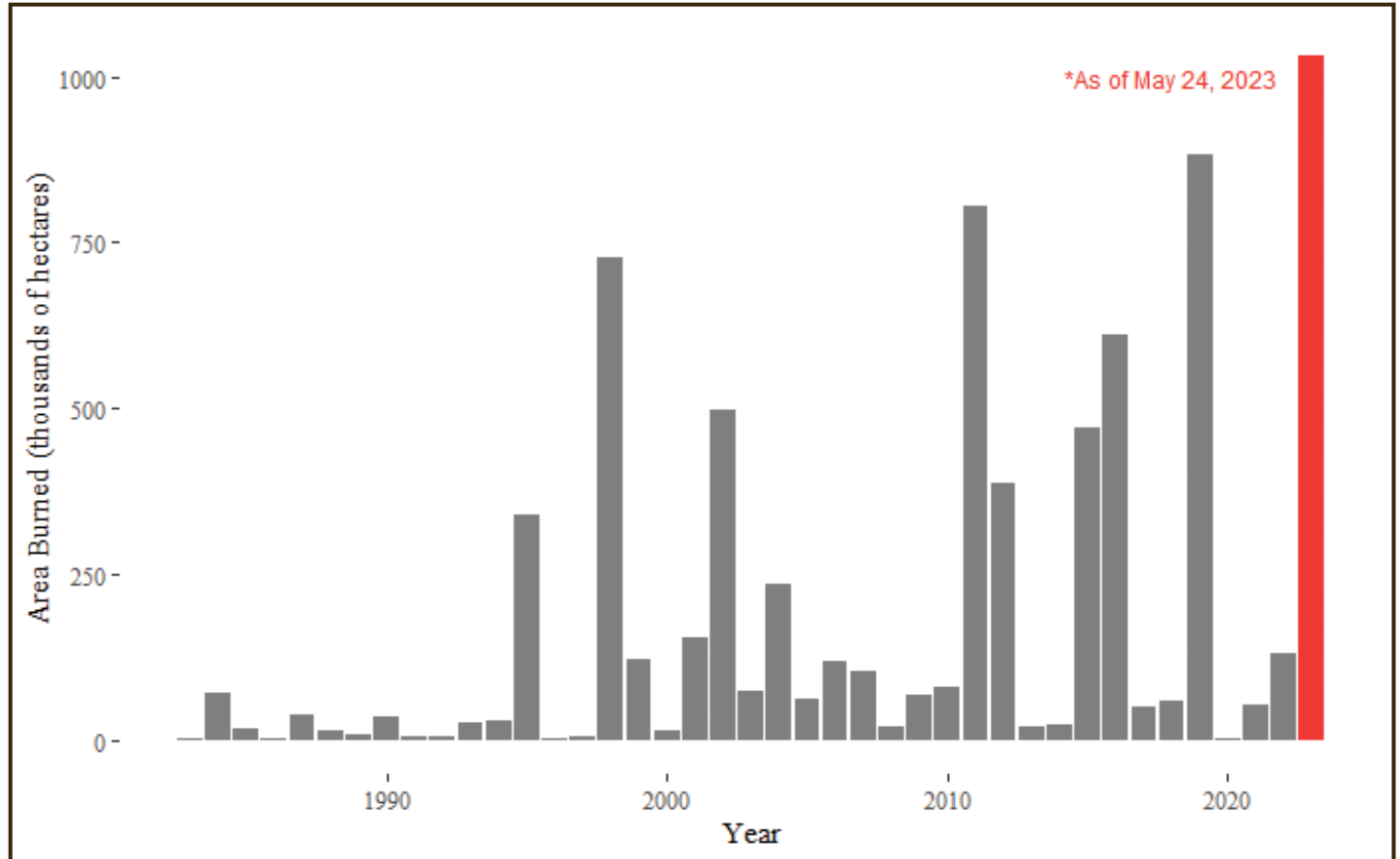
A provincial state of emergency was declared on May 6 as 110 active wildfires raged, 37 of which were classified as out of

control. By May 7, more than 29,000 Albertans were displaced from their homes and communities due to wildfire evacuations. Many people's homes were destroyed, including 45 structures in Sturgeon Lake Cree Nation, more than 100 structures in the community of Fox Lake, 25 homes in Yellowhead County, 27 homes in the East Prairie Metis Settlement in the Slave Lake region, and many more. Other Albertans are worrying about their friends and family in affected areas and dealing with the health effects of wildfire smoke. It is devastating to think of all those in Western

Canada who have been affected by this disaster.

If you are thinking that it's unusual for wildfires to be this bad in May, you are correct. As of May 24, the total area burned this wildfire season in Alberta was the highest in 40 years.

The question on many people's minds is: What is causing this wildfire disaster, and could it be prevented in the future? Climate change plays a big role in many natural disasters including wildfires. It is expected that as extreme high temperatures and drought become more common with a



Total area burned in Alberta by wildfires from 1983 to May 24, 2023. Data from Government of Alberta.

changing climate, we will deal with more frequent and severe wildfires. There is no doubt that climate change played a role in the 2023 Alberta wildfires. This should act as a sobering reminder that the time to act on climate change is now, if not many decades ago. As the proverb goes: “The best time to plant a tree was 20 years ago. The second-best time is now.” This means urgently transitioning away from fossil fuels today, rather than putting it off again and again for future generations to deal with a bigger problem later.

Most of the arguments against transitioning away from fossil fuels to prevent climate change involve economic concerns. However, these wildfires are an important example of the economic costs associated with climate change. The 2016 Fort McMurray wildfire was the most expensive natural disaster in Canada’s history as measured by insurance payouts. As of May 20, an estimated 275 structures have burned during the 2023 wildfire season. What are the economic costs of closing a major highway due to an out-of-control wildfire, and the costs to the healthcare system from the poor air quality resulting from wildfire smoke? Highway 43 in northwest Alberta between Fox Creek and Little Smoky was closed for several days, forcing trucks to turn back or stop along the road. On May 21, Alberta had the worst air quality in the world due to the extensive wildfire smoke. These conditions can exacerbate existing health problems like asthma, lung disease, and heart disease, and can be very dangerous even to those without pre-existing health conditions. What are the consequences of these fires to the lives of Albertans and to the health care system, I wonder?

Although climate change is a major player, it is not the sole culprit in this crisis. There are many things that we could do — and could have done — to prevent the frequency and severity of wildfires. Among those measures includes a change to how Alberta manages its forests.

There is a rhetoric perpetuated by forestry companies that older forests are dangerous to society due to the high levels of fuels that accumulate, and therefore they must be logged. Companies insist that fire suppression has led to an unnatural amount of old forests on the landscape which are

more susceptible to burn. Unsurprisingly, old forests are also more profitable, because companies get more wood from each tree cut down. However, there is research indicating that wildfires in Alberta’s boreal mixed wood forests are more likely in landscapes that have a higher proportion of already-harvested areas (e.g., forests that have been logged in the last 30 years). This is likely because logging can dry out the landscape; forest trees and their roots hold onto water that would otherwise evaporate. Old forests can be better at retaining moisture than young forests, and wildfires in old-growth forests are often less intense than those in young forests. Fire suppression has certainly occurred over the last century, but that doesn’t mean that we have an excess of old forests that need to be logged. Our province’s forests are wildly over-allocated for forestry (leading to the decline of beloved forest-dwelling species like woodland caribou). All you have to do is take a look on Google Earth to see the horrifying swaths of clear-cuts that occur every year in our forests. But all this logging does not emulate natural forest fires and is not protecting Albertans from large, out-of-control burns.

Another harmful forestry practice is spraying glyphosate on regenerating forests (forests that have been logged and are starting to grow back). Glyphosate is a herbicide widely known under the name “Roundup” and is famous for the many lawsuits against the company that produces it because of its alleged link to a form of cancer called non-Hodgkin’s lymphoma. In forestry, glyphosate is used to kill deciduous trees and other plants that compete for light and nutrients with the more commercially valuable conifers (evergreen trees) that many forestry companies want to harvest. This essentially creates a monocrop of one species of tree, rather than a diverse forest ecosystem. Unfortunately, it turns out that deciduous trees such as aspen are much more resistant to fire than conifers, apart from early spring prior to their new leaves emerging. The effect of suppressing aspen growth in managed forests is to remove much-needed fire breaks that could reduce the spread of wildfires. Rather than preventing wildfires, forestry practices have created vast dry landscapes full of the most flammable trees.

To make matters worse, the Government of Alberta has cut many of the province’s wildfire response resources over the last few years. Knowing that we are in the midst of a climate crisis, it is crucial to have appropriate wildfire responses to fight fires when they do occur and to protect people and communities. However, the Government of Alberta shut down 26 fire towers across the province in 2019, which are responsible for detecting wildfires early while they are still small. The Government of Alberta’s 2019 wildfire review report indicates that when crews arrive at a high-intensity wildfire when the fire is under two hectares in size, there is a 94 percent chance that the fire will be contained by the following morning. This is compared to a 43 percent chance of the fire being contained the next morning when crews arrive, and the fire is greater than two hectares in size. Funding for the Rappel Attack Program was also cut in 2019, a program where firefighters rappel from helicopters to suppress fires in areas that are otherwise difficult to access. Staffing cuts were made to Alberta Wildfire in 2020, and in 2022 there was a 10 percent reduction in wildfire staff’s seasonal contract length, leading to contracts starting later and ending earlier and leaving us vulnerable in spring and fall.

Moving forward, we need a proactive approach to dealing with wildfires. This means tackling climate change, modernizing forestry practices, and increasing the province’s wildfire response capacity. The solution to the wildfire problem is not to clear-cut every mature forest in the province and grow back plantations of conifers while cutting funding to fight fires. Forest management needs to shift from focusing on timber supply to prioritizing ecological values. In this way, forests could be managed with a mixture of safe prescribed and traditional burns (as informed by Indigenous practices), and sustainable logging in appropriate areas. This would have multiple benefits including reducing fire risk and retaining healthy, resilient forests that provide a suite of ecological services including sequestering carbon and retaining water. Without making these important changes, we can expect to see many more record-breaking wildfire seasons in the years to come. 🌲