

The Burning Question: What Wildfire Adaptation Planning Lessons Can British Columbia, Canada Learn from Other Jurisdictions?

Report Summary

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Preface: Inspiration and the Beginnings of the Project

I lived at the south end of Winnipeg in 2021 while studying at the University of Manitoba in the Master of City Planning program. Just outside my condo, I could look down Pembina Highway, one of the city's multilane arterial boulevards, and see for kilometres down the straight, wide street. That changed during my first summer in the city when the smoke came. It reminded me of my visit to San Francisco in the fall of 2018 (see Figure 1). A thick haze hanging in the air, obscuring visibility and filling my nostrils and lungs with the pungent, sticky aroma of charred vegetation. California was dealing with an

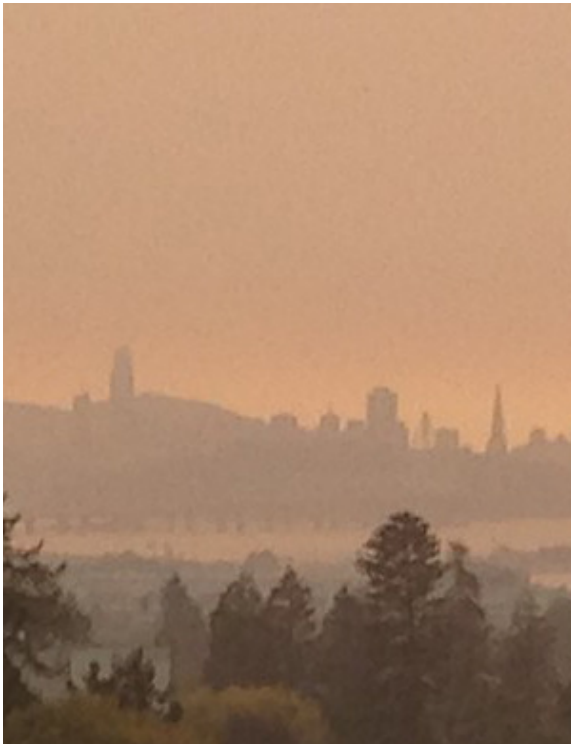


Figure 1: Looking Towards San Francisco Under Smoky Sky

intense wildfire season that year, and the restrictive nature of the smoke choking the city of San Francisco was experienced throughout much of the Bay Area. I could only imagine how it was affecting the lives of people living there long-term – until the summer of 2021. For the first time, I was living in a city for which the weather forecast included warnings for smoke. When I went outside the first day there was a noticeable amount of it in the air, things looked a little off. Colours were less vibrant and there was less light permeating the landscape than usual. It looked like a cloud of fog, but the air was hot and dry. The smell was the most intense indicator of what was happening. It smelled like everyone in the city was having a bonfire. The usual view down Pembina Highway was obscured to nothing further than 50 metres. A few minutes out riding my bike was enough for my body to notice the smoke as well. A bit of breathing trouble convinced me this smoke was restricting more than people's visibility.

While destructive and repugnant in nature, those smoky summer days in Winnipeg were the initial inspiration for this research project on wildfires. Evidently, cities full of smoke are not conducive to an agreeable quality of life. Exposure to smoke-filled air provided a degree of lived experience to help put the situation into perspective. The smoke Winnipeg hosted in early July came from fires burning hundreds of kilometres away in Ontario (CBC, 2021). If fires burning that far from a city can fill its streets with smoke, fires burning much closer could have immeasurably worse impacts on human health and daily life.

Background: Relevance of the Topic

Wildfires are threatening countries globally like never before (Weston, 2022). In Canada, many provinces have been facing catastrophic wildfire events in recent years. British Columbia was among the hardest hit provinces in the summer of 2021, enduring its third worst fire season on record with 8,700 square kilometres of land scorched and many communities evacuated (Kulkarni, 2021). BC experienced unprecedented heat waves in 2021 as well, which included the hottest temperatures ever recorded in Canada. These temperatures occurred sequentially over the course of just three days in the town of Lytton, which was entirely consumed in a wildfire days later (Lindsay, 2021). Extreme heat and drought spawned a perfect storm of conditions conducive to wildfires in the province, and since BC is already prone to drought, the risk of wildfire is further increased (Boothby, 2021).

The Argument

Given these recent events, it is clear that taking a primarily reactionary approach to wildfires is not enough to protect against the dangers they pose to human life, ecosystems and built environments. Further, it is not an appropriate response to the threat of increasingly catastrophic wildfires to cast a future goal of reducing climate change while maintaining “business as usual” presently. Strategic adaptation is needed because the dangers of wildfires are present now.



Figure 2: Wildfire in BC

Research Methods: Amassing the Data

This report uses relevant literature and precedents to develop an understanding of what constitutes an effective response to the increasing severity of wildfires. The research is then applied comparatively to the response seen in BC. Specific attention is given to how different levels of government and non-governmental entities collaborate to address current and forecast issues, as the literature reveals unequivocally that intergovernmental and stakeholder stewardship is essential to successful adaptation planning. The Metro Vancouver Region is examined as the regional context for the report, as it has two recent regional growth strategy plans, Metro 2040 and its updated counterpart, Metro

2050. A significant objective of this report is to ascertain whether these plans – specifically the more recent Metro 2050 – indicate acknowledgement of wildfire risks and strategies to appropriately address them. Attention is given to whether these plans contain strategies congruent to the literature and successes of the precedent areas studied. The report provides insight as to how municipalities, the Metro Region, the Province and the Federal government can take heed of the literature and precedents. It asks questions to probe the information and decision making within the regional plans, or lack thereof, and to advance the discourse on the extremely pertinent and evolving issue of wildfires.

The research includes a literature review and a precedent study. While the literature is extensive, the review focuses on works that identify risks of wildfires as they pertain to a global and Canadian context, as well as the contexts of the precedents. Also selected for the literature review are texts that examine needs and strategies for climate change adaptation planning and wildfire risk mitigation. The literature review is intended to provide a foundation of research to bolster the recommendation for adaptation planning for the Metro Vancouver Region in BC in the face of increasing wildfire risks.

The precedent study provides a window into the operations of two regions stricken with intense and catastrophic wildfires, similar to many Canadian provinces. These regions are the State of New South Wales, Australia and the State of California, USA. Specifically, the precedent study examines policy documents from these regions and determines how smaller regions within each precedent state practice correspondence with their respective regional plans. In observing strategies already in place, this research provides opportunities for the Province of BC and the Metro Vancouver Region to learn from the successes and shortcomings of these precedents, and to adopt some of the policies and recommendations.

The regions examined for the precedent study have each experienced catastrophic wildfires in recent years at the time of writing the report, making them suitable for comparison with BC. 11 of California’s 20 largest wildfires burned within the five years preceding the writing of the report (Government of California, 2022). Similarly, New South Wales’s worst wildfire season ever recorded – nicknamed “the Black Summer” – was the summer of 2019-2020 (AIDR, 2020).



Figure 3: Scorched Ground Post-Bush Fire in New South Wales, Australia



Research Questions: Guiding the Process

The following three questions guide the research informing the report.

- a) How are regions outside Canada – particularly in other developed nations such as the United States and Australia – already tackling the issue of living with elevated wildfire risk?
- b) To what extent do existing planning policies applicable to the Metro Vancouver region’s Metro 2040 plan and Draft Metro 2050 plan currently address wildfire risk?
- c) Given that the risks of climate change are present and worsening, how does planning policy need to evolve and change to maintain quality of life in BC and the Metro Vancouver Region?

While these questions orient the research and precedent analysis and do receive answers throughout the report, these answers are not comprehensive. The discourse surrounding The Metro Vancouver Region’s, Province of BC’s and Canada’s responses to climate change and its effects on wildfires can and should continue to keep these regions safe and healthy.

Conclusion: What Does It All Mean?

The report demonstrates there is strong evidence that immediate action must be taken to protect against severe damage and losses to human life, ecosystems and built environments. Such action must come in the form of adaptation with a strong focus on specific regional and municipal needs, and must involve government collaboration across all levels and with non-governmental stakeholders.

This report encompasses a sample of the extensive information available at the time it is written, but the discourse is ongoing. Just as the needs of regions across Canada are various in nature and continually evolving, so is the knowledge and best practices surrounding climate change and its effects on catastrophic wildfires. Adaptation involves constant evaluation and re-evaluation, and as such, the work this report represents is never done.

List of Figures

Figure 1: Looking Towards San Francisco Under Smoky Sky

Stuart, M Y. (October, 2017). "Fires to the North - Bad Air to the South." Flickr. <https://www.flickr.com/photos/melystu/36934016484/in/photolist-YgJukE-9GQvPh-2jyQMp8-2jyQMeU-2mGcQbX-2bEraxE-YoXDGg-2jxYiLb-LcBehR-2mNnMc3-2hDDABE-28zBCFc-29XBpFv-2mkSglG-29TmoNy-29XBpEt-2cLUZkH-2mGg3td-2jEJmqx-fkIUnV-2jAxqNv-zxRbDQ-2jENAVf-2jAt88p-ecNhKD-2cNxy5H-2jEMPC5-YXPZDA-2j7TiKS-QFeV63-ZjdiFQ-2jyhFUj-VADYoe-U8xYBl-dATtdA-p4VgeW-2jKFEKH-33iGKK-28wzMS9-2cFTgrA-MuaiCh-2jNw8Fv-PgoGyc-2cX9aIE-27nsDd7-otaPiM-DiyWfe-27FwZln-2a8iMVg-2eA7MGx>.

Figure 2: Wildfire in BC

Province of British Columbia. (July, 2017). "Firefighting Personnel Battle Wildfire Across the Province." Flickr. <https://www.flickr.com/photos/bcgovphotos/35795301861/in/photolist-Wx7h9V-Wx7hB8-S3nDTX-ddK7ki-QKTqMA-Wx7iiZ-29bS72B-QKTr8L-S3nF9x-S3nEE6-2dSfCH6-2dSfzTZ-24DzUkP-DdrxYK-29K7ojc-SHYXXt-2dSfCti-T7WULC-HzfuLq-2dSfxFn-RuK SaR-kUE5p6-2dSfCeR-RuKRj2-2dSfxaT-2dSfxmK-2eadJcJ-RuKP jR-2fg7uBH-SwEfft-SHYXkM-kUEDcZ-RuKP2g-2eadK3m-RuKR4n-HBDSmR-Rrvry9-HzftLj-dSuBbn-yWnNGM-z535ig-yVAwUi-Rr vs5u-RrvsuN-E8vhrQ-DdryDc-yWnPmn-SkCzuE-fvMnNY-vEpWfT>.

Figure 3: Scorched Ground Post-Bush Fire in New South Wales, Australia

Planning for Bush Fire Protection 2019. (2019). Untitled. Government of New South Wales. https://www.rfs.nsw.gov.au/_data/assets/pdf_file/0005/130667/Planning-for-Bush-Fire-Protection-2019.pdf.

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