**To:** Dr. Erika Paterson

**From:** Dakota Tryhuba

**Date:** February 1, 2019

**Subject:** Proposal for resolving an urban controversy concerning extreme heat conditions on Montréal’s urban development

**Introduction**

One of the most critical issues facing our world today is climate change, which the United Nations has described as one of the greatest challenges facing humanity. Simply put, climate change is a byproduct of human-related driving forces such as the combustion of fossil fuels and land-use changes, with wide-ranging consequences for the planet and human settlements in all corners of the world. One of the most imminent consequences of climate change is the increased frequency and intensity of heat waves. Heat waves can have considerable health impacts, even in the context of developed countries. Since 1880, the global average surface temperature has increased by 0.85℃ (Maslin, 2014), and as more and more CO₂ emissions are released into the atmosphere, the effects of climate change will gravely threaten and challenge human society.

**Statement of Problem**

Environment and Climate Change Canada (ECCC) (2010) has shown that in Canada, all four seasons have seen a warming trend since 1948. According to ECCC’s study, the hottest year on record was surpassed in 2010 making it the warmest year for Canada in 63 years. The study showed that the temperatures for the 12-month period from December 2009 to November 2010 averaged 2.9°C warmer than normal and almost a half degree higher than the previous warmest years in 2006 and 1998. For Montréal Québec, July 2018 was marked by another oppressive heat wave during the period July 1st to 8th. Recent climate abnormalities in Montréal have led to unforeseen casualties amongst the local population, evidently becoming a very contentious issue in Canada. During the week of July 1 to July 8, 2018, heat indexes soared over 37℃, resulting in over 90 deaths throughout the province, leading many to speculate direct cause behind these heat-related fatalities, and it has also prompted an investigation on how the region should intervene more rapidly during these increasingly recurrent extreme weather events. Thus, further investigation on intervention methods is needed to prevent further casualties throughout the region during increased climate abnormalities.

**Proposed Solution**

One possible solution to the issue of deaths from extreme heat events is to find ways for further increasing the ownership of household air conditioning systems and other forms of urban cooling to mitigate the urban heat island effect, especially in residential areas where the greatest amount of heat-related deaths is occurring.

**Scope**

In order to develop cogent, balanced, and well-supported recommendations, I plan to pursue six areas of inquiry:

1. What is the issue and its relationship to the city?
2. What makes this issue contentious?
3. Who are the actors involved and what are the various views expressed about the issue in question?
4. What interests may be missing from the debate and therefore missing from the news or published reports?
5. What solutions are there for mitigating this issue?
6. What course of action can I recommend to the city council?

**Methods**

My primary data sources will include the results from a study regarding the health impacts of the July 2010 heat wave in Québec, as well as statistical data retrieved from *Environment and Climate Change Canada*.

Secondary sources will include news reports on heat waves in Montréal, and a review of several government issued reports such as the *Climate Change Adaptation for the Montréal Urban Agglomeration 2015-2020* report issued by the City of Montréal and *Urban Heat Island Mitigation Strategies*report issued by the National Institute of Public Health of Québec.

**Qualifications**

I have been following the issue of heat waves in Québec and the effects on the local population since the last two major heat events that took place in 2010 and 2018. I will receive my B.A in geography this coming June of 2019. Thus, I am familiar with the merits of urban planning and development processes within cities and have firsthand experience conducting a research report on an unrelated development issue for Vernon’s city council to review. My expertise in the field of geography provides me with the skills to conduct an investigation on this issue in Montréal and provide a list of well-supported recommendations for the city council to consider.

**Conclusion**

Cleary action is needed in the development sector to reduce the mortality rate in Montréal from oppressive heat conditions. By addressing the six areas of inquiry mentioned earlier, I can develop cogent, balanced, and well-supported recommendations to advise to the city council. With your approval, I will begin research at once.

**References**

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