

**To:** Mayor Josh Morgan, Members of the Community and Protective Services Committee

**From:** Madelyn Hertz  
695 Richmond Street, N6A 5M8

**Re:** 12th Meeting of Community and Protective Services Committee, August 15, 2023, Item PPM, Fireworks By-law Review on the Agenda

Hello Mayor Morgan and Community and Protective Services Committee Members,

I am a doctoral student at Western University and resident of the City of London. I am writing to you as my contribution to the public participation meeting to address the topic of fireworks and the City of London's Fireworks By-Law. The main purpose of my letter is to request that the committee **choose Option B** within the proposed by-law changes to ban the sale and use of consumer fireworks in London.

I believe the banning of consumer fireworks is a good start towards London modernizing future celebrations to be more mindful of the harmful impacts that fireworks have on the environment, people, and wildlife alike. Additionally, I believe serious changes are needed to recognize the colonial history behind the holidays in which fireworks are currently used.

As you know, the City of London declared a Climate Emergency in 2019 and adopted a Climate Emergency Action Plan in the spring of 2022. I believe that Council is obligated to look at the issue of fireworks through the lens of its Climate Emergency Screening Tool. We know that traditional fireworks contain harmful chemical components that pollute our environment and that those pollutants accumulate over time in both soil and water.

I understand that some councillors believe there are other, larger pollutants and social issues that we should be worried about instead. However, the fact that bigger issues exist, doesn't automatically make it acceptable to ignore the environmental harms of smaller issues such as fireworks. If this issue is so small, why can't we acknowledge its toxic and deadly impacts on the environment by simply banning the use and sale of fireworks so that we can be done with the matter and thus move on to those bigger issues? Shouldn't we at least try to make improvements where we can as a municipality? It's through these "small changes" that we are able to begin enacting real and tangible change in our communities.

This summer, London has had multiple air quality warnings due to the smoke from wildfires north of us, particularly in the days leading up to Canada Day. It was disappointing that the council did not discuss canceling the City's fireworks display for Canada Day in light of those poor air quality reports. As global temperatures continue to increase, the issue of droughts, wildfires, and poor air quality will also continue to increase. We need to act now!

As someone that has previously worked as a wildland firefighter, I am keenly aware of the hazards that fireworks pose. In the United States, more wildfires start on the Fourth of July than any other day of the year, in no small part due to its notoriety as a firework-friendly holiday. In 2021, the National Fire Protection Association (NFPA) notes that there were over 12,000 fires

caused by fireworks on the Fourth of July<sup>1</sup>. While raw data for Canada isn't as available, several cities, including Montreal, have cancelled fireworks displays in the past due to air quality and wildfire risks. Canadian cities and towns are aware of the risks that fireworks pose; backyard fireworks are more dangerous because they aren't monitored in the same way as display fireworks, posing an even greater risk. I urge you, on behalf of the city of London, to recognize the dangers that backyard fireworks pose as many others have already.

A particular concern with the City's Canada Day fireworks celebrations is that they are held over the Forks of the Thames.

*"It was originally thought that perchlorate in fireworks would not be an issue since it supposedly would be burned in the air, but studies done in Oklahoma and Massachusetts have found significant levels of the chemical in lakes and groundwater, primarily following firework shows."<sup>2</sup>*

Perchlorate can accumulate in our drinking water and at high levels, it disrupts thyroid function and the related hormones that are essential for normal development. Even at lower levels exposed fetuses, infants, and young children are at risk of developing hyperthyroidism and thyroid cancer. This is only the tip of the iceberg regarding the negative impacts that fireworks fallout can have on human health. The heavy metals and toxic particulates that fireworks are composed of are known to damage human cells and animal lungs. A doctor with the NYU Grossman School of Medicine states, "**Although people are only exposed to these substances for a short time each year, they are much more toxic than the pollutants we breathe every day.**"<sup>3</sup>

These pollutants "can remain in the region for **days** after fireworks."<sup>4</sup> The particulates then "settle to the earth, contaminating soil, groundwater sources, and bodies of water." While some may argue that this perchlorate contamination goes away eventually, and is therefore a non-issue, I believe that the **20 to 80 days**<sup>5</sup> it takes for perchlorate concentrations to return to background levels after fireworks displays is not something to ignore. Just because something goes away eventually, doesn't mean it hasn't caused lasting damage to the environment. Birds typically learn to fly within a month of being born, showing that a lot can happen in a short time, especially regarding wildlife development; according to these figures, some animals would reach near-maturity before firework pollutants degrade. When looking at humans, 80 weeks is almost the length of one trimester, a time critical to fetal development.

Fireworks over the Thames are a huge threat not just to London's wildlife and people, but also to the Chippewas of the Thames First Nation, Oneida Nation of the Thames, Delaware Nation, and Munsee Delaware Nation because, which are all downstream from London. Not only is the toxic output from fireworks an environmental concern, but it is also a matter that falls within the Truth and Reconciliation Commission's calls to action. This specifically applies to practicing

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<sup>1</sup> <https://www.abc57.com/news/the-dangers-of-fireworks-increased-fire-risk-in-drought-and-decreased-air-quality#:~:text=Researchers%20have%20found%20that%20more,fires%20started%20due%20to%20fireworks.>

<sup>2</sup> <https://www.sustainablebizconsulting.com/blog/toxic-chemicals-in-fireworks-might-want-to-hold-your-breath>

<sup>3</sup> <https://nyulangone.org/news/common-fireworks-release-lead-copper-other-toxic-metals-air#:~:text=Along%20with%20lead%2C%20titanium%2C%20strontium,Gordon.>

<sup>4</sup> <https://www.sustainablebizconsulting.com/blog/toxic-chemicals-in-fireworks-might-want-to-hold-your-breath>

<sup>5</sup> [https://www.researchgate.net/publication/6225972\\_Perchlorate\\_Behavior\\_in\\_a\\_Municipal\\_Lake\\_Following\\_Fireworks\\_Displays](https://www.researchgate.net/publication/6225972_Perchlorate_Behavior_in_a_Municipal_Lake_Following_Fireworks_Displays)

“meaningful consultations, and obtaining the free, prior and informed consent of Indigenous peoples”<sup>6</sup> when activities within the city have a chance to impact their populations on reserve. Some councillors believe that a ban won’t work because they assume people will just drive outside of the city to buy fireworks. If a consumer ban goes into effect, that may happen. However, impulse shopping will be curbed, and we believe that will result in a significant decline in the number of fireworks discharged. It’s worth noting that, nearby, Woodstock’s city council has passed a motion for a ban on the detonation and sales of consumer fireworks (July 13, 2023). Their fire department is currently drafting that ban.

Other nearby municipalities such as Caledon have moved forward with a consumer ban and shared evidence that it appears to be working. They started discussing a ban on fireworks in 2018, **BEFORE** the pandemic, due to safety and environmental concerns. Please consider this statement from the Mayor of Caledon (Caledon banned consumer fireworks in 2021), who recently said, “We received five emails and nine phone calls over the Victoria Day weekend to report personal fireworks activity. That is a marked improvement over previous years.”<sup>7</sup> Has any councillor who said that a ban won’t work taken the time to contact city officials in Caledon or Brampton where consumer fireworks have been banned? Consulting with nearby officials on the efficacy of these bans is crucial to informing our own decisions and building upon existing experience.

A similar rebuttal regarding people buying outside of the city was offered in resistance to the cosmetic pesticide ban that has been successfully implemented in London, massively reducing the toxins going into our soils every year. A firework ban would likely be similarly effective and would significantly reduce occurrences of consumer fireworks and thus the harms that come with them.

Some councillors may be concerned that a consumer ban on fireworks will eliminate a legal industry that creates jobs in our city. I’d like to remind the Committee members that it is not your responsibility to ensure that local businesses keep up with the times. When a smoking ban in restaurants and bars came into effect, people complained that a ban would have a negative impact on businesses and that there would be a loss of revenue. What actually happened? Businesses adapted and thrived as they always do when things change. Some fireworks companies like NorthStar Fireworks and Drones Shows, started adapting to the changing times a number of years ago. Formerly, they were a business that provided fireworks only, now, they have grown their business to include drone shows<sup>8</sup>. This development of drone shows demonstrates the flexibility of the industry. Furthermore, drone shows are likely more accessible and less logistically demanding, allowing for increased opportunities and therefore allowing companies that adapt to access previously untapped markets.

I know that some councillors are also concerned that a consumer ban on fireworks will not be enforceable because the City lacks the amount of staff required to enforce a ban. However, the City hasn’t been able to enforce the current by-law either. Making a switch to preventing **all** consumer fireworks from being sold locally will make implementation much clearer than the current bylaw.

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6 [https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenous-people/aboriginal-peoples-documents/calls\\_to\\_action\\_english2.pdf](https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/indigenous-people/aboriginal-peoples-documents/calls_to_action_english2.pdf)

7 <https://www.caledon.ca/en/news/fireworks-bylaw-helps-ease-complaints.aspx>

8 [https://www.cbc.ca/news/canada/london/fed-up-with-fireworks-maybe-it-s-time-to-fly-up-the-drones-](https://www.cbc.ca/news/canada/london/fed-up-with-fireworks-maybe-it-s-time-to-fly-up-the-drones-1.6871034?fbclid=IwAR1BzmeQ_GuxHkaddu_gQRsBN0wX3O3CRRoXymH7OZAbezcbPnojdDpmOk)

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Right now, many people don't understand when or even where fireworks are permitted or prohibited. Further, many don't even know how or where to report violations. With a complete ban on consumer fireworks, Londoners will then know that **any** backyard show is prohibited. It's reasonable to expect that a consumer ban would lead to information about where to report violations spreading much faster among groups as the conversation about the ban also spreads. This clarity would allow for easier enforcement and easier adherence by citizens.

You will hear much more at the PPM from residents who have grave concerns about the harmful impact of fireworks. Contrary to the beliefs of some councillors, we are not a minority or a "special interests" group. We represent at least half of all Londoners who want stronger regulations against fireworks in the form of a ban on **ALL** consumer works and a ban on all public special event fireworks, with a switch to environmentally friendly forms of light shows such as lasers or drones.

We know that celebrations bring us together as a community. The desire to end traditional fireworks isn't about stopping celebrations. This is a call to modernize our celebrations, be accountable to Truth and Reconciliation recommendations, AND switch to more environmentally friendly means of celebrating (e.g., laser or drone light shows). How can the average Londoner be expected to participate in the Climate Emergency Action Plan (e.g. Londoners are advised by the City to get started on climate action by reducing transportation impacts by switching to an electric vehicle, a hybrid vehicle, or a very fuel efficient one, and making their home more energy efficient and severe weather resilient<sup>9</sup>), if the City fails to do something as simple as look for less-harmful alternatives to a means of celebration that has been scientifically proven to be toxic (i.e. fireworks)? Banning consumer fireworks in London would show that there is environmental action taking place in City at both the individual and municipal level, bolstering individual efforts and marking tangible progress.

In conclusion, once again, I kindly urge you to adopt **Option B** of the proposed fireworks by-law and ban all consumer fireworks in London for both the betterment of London now, as well as for the London we are building for future generations.

Thank you for your time and consideration.

Kindest Regards,

Madelyn Hertz

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<sup>9</sup> <https://london.ca/living-london/water-environment/londons-climate-emergency-declaration>