

**To:** Chair Pelozza, and Members of the Community and Protective Services Committee

**From:** Becca Amendola

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

Hello Chair Pelozza, and CPSC Committee Members,

I am writing to you as one of the co-founders of the grassroots group Londoners for Quiet Fireworks to address the topic of fireworks and the City of London's Fireworks By-Law. The main purpose of my letter is to provide facts, data, and information to supplement my brief, 5-minute delegation in which I will be requesting 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, pets, and wildlife alike.

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. This plan necessitates that the Council view all public events and celebrations through the lens of its Climate Emergency Screening Tool and events with fireworks should be no exception. We know that traditional fireworks contain toxic metals and harmful chemical components that pollute our environment and that those pollutants accumulate over time in both soil and water<sup>1</sup>. This means that these chemical pollutants do not dissipate over time once they have been put into the environment. Each year a fireworks show is hosted in the same location (ex. the Forks of the Thames) the toxicity levels of all nearby waters and soils get higher than the year before.

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 take the Climate Emergency Screening Tool into consideration at that time by discussing cancelling the City's fireworks display 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. Thus, we need to act now and be mindful of every action we're taking to worsen the issue, no matter how big or small!

A huge concern with the City's Canada Day fireworks celebrations in particular 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,*

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<sup>1</sup> <https://link.springer.com/article/10.1007/s10661-014-3921-4>

*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>

What's more, the excessive noise is incredibly disruptive and triggering to individuals with various mental health struggles such as complex post-traumatic stress disorder, autism, or other sensory processing disorders.<sup>4</sup> As a sanctuary city for refugees from war-torn countries, I think we should be much more considerate of the negative impacts fireworks have on people who are sensitive to sudden, loud noises. Especially when the loud noises are intended to last for extended periods of time the way a fireworks show is designed to do.

In terms of wildlife, many mothering birds and animals around waterways frequently abandon their young when fleeing from the excessive noises and can sometimes get burned and/or killed by fireworks themselves as they flee.<sup>5</sup> In this regard, fireworks over the Thames are a huge threat not only 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 they are all downstream from London. The toxic output from fireworks burned over the Thames River is a matter that falls within the Truth and Reconciliation Commission's calls to action and the Shared Waters Approach.<sup>6</sup> With the knowledge that city fireworks shows are hosted over water that later flows into indigenous communities, it is the obligation of the council to practise "meaningful consultations, and obtaining the free, prior and informed consent of Indigenous peoples"<sup>7</sup> before executing future shows because the fireworks fallout will inevitably impact their waters on reserve. Thus, if the city is going to persist with excessively toxic fireworks shows to celebrate Canada Day or any other day then the reserves should be consulted in advance to address how London can be accountable for the toxic fallout that is produced by those events.

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. Are we not able to focus our energies on more than one topic that affects us and our environment? If this issue is so small, why can't we acknowledge the scientifically proven toxic

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

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

4 <https://journals.sagepub.com/doi/abs/10.1177/1088357613475810>

5 [http://www.meteo.fr/cic/meetings/2012/ERAD/extended\\_abs/NMUR\\_064\\_ext\\_abs.pdf](http://www.meteo.fr/cic/meetings/2012/ERAD/extended_abs/NMUR_064_ext_abs.pdf)

6 <https://www.thamesrevival.ca/wp-content/uploads/2020/05/SharedWatersApproach-Dec2019finaldraft.pdf>

7 [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)

and deadly impacts on the environment and rectify those issues by simply banning the use and sale of consumer 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 improve where we can as a municipality?

Some councillors believe that a ban won't work because they assume people will just drive outside of the city to buy fireworks. A similar rebuttal was offered in resistance to the cosmetic pesticide ban but it has been successfully implemented and since massively reduced the toxins going into our soils every year. The pesticide ban is an example that was in fact so successful that many other municipalities started adopting it, eventually leading to the implementation of a province-wide ban. Even if some people insistently buy fireworks outside of the city and violate the bylaw, implementing a ban will still definitely curb impulse purchases, thus undoubtedly reducing the toxins put into the environment by fireworks each year.

The proposal of a fireworks ban is not a new concept. There are many other Canadian cities and municipalities that have successfully implemented a fireworks ban. Some examples close by include Caledon and Brampton. Caledon began considering a ban in 2018 due to safety and environmental concerns, moving forward with a consumer ban in 2021, and has since shared evidence that it appears to be working. Please consider this statement from the Mayor of Caledon, 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>8</sup> It's worth also noting that Woodstock's city council has just recently passed a motion for a ban on the detonation and sales of consumer fireworks back in mid-July. Their fire department is currently drafting that ban. Additionally, there are multiple locations in western Canada that have had a ban on consumer fireworks in place for multiple years such as Banff, Alberta, and the district of Sicamous in British Columbia.

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. If the bans in Caledon and Brampton are any indication, we will likely require less involvement with the LFD and By-law Office, not more. However, it should be taken into consideration that the City hasn't been able to enforce the current by-law either. A consumer fireworks ban is much more cut and dry than the current by-law so it's reasonable to assume that preventing **all** consumer fireworks from being sold locally will make enforcement much more cut and dry as well.

Right now, many people don't understand when or even where fireworks are permitted or prohibited. With a complete ban on consumer fireworks, Londoners will then know that **any** backyard show is prohibited. Further, many don't know how or where to report violations. This could be seen in the data collected through Google Forms by the Londoners for Quiet Fireworks group between May and July of this year (2023). Through this data collection the group had over a hundred Londoners report that they have experienced fireworks detonated nearby at a time and/or on a date when fireworks were not permitted. Of these reports, only about 5% knew where to report the violations to the city.<sup>9</sup> It's reasonable to expect that a consumer ban would

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<sup>8</sup> <https://www.caledon.ca/en/news/fireworks-bylaw-helps-ease-complaints.aspx>

<sup>9</sup> [https://docs.google.com/document/d/1UrevEeIFamM5Wqghuw6yJM\\_W8kPwecssDxKj1TT1eU/edit](https://docs.google.com/document/d/1UrevEeIFamM5Wqghuw6yJM_W8kPwecssDxKj1TT1eU/edit)

lead to information about where to report violations spreading much faster among groups as the conversation about the ban also spreads.

Some councillors may be concerned that a consumer ban on fireworks will eliminate a legal industry that creates jobs in our city. With this, 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. But in reality, businesses adapted and thrived as they always do when things change. What's more, some municipalities have since implemented even stricter smoking bans than the one created by the province, further demonstrating its effectiveness without negatively impacting business revenues. 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, but now they have grown their business to include drone shows as well.<sup>10</sup> So there is no reason that other local fireworks business cant follow suit with NorthStar.

You will hear more concerns like the ones mentioned in this letter at the public participation meeting from residents who have learned about the harmful impact of fireworks and would like the city to make a change for the better. Contrary to the beliefs of some councillors, we are not a minority, 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 fireworks. Many of these residents would also like to see the city celebrations switch to environmentally-friendly forms of light shows such as lasers or drones. Drones in particular are significantly more renewable and can be seen from farther away than lasers or fireworks which means they can be enjoyed by even more people across the city.

Please consider this video of Waterloo's Canada Day drone show for 2023:

<https://www.youtube.com/watch?v=m8eRZQJ1rRc>

This is Waterloos drone show for last year (2022):

<https://www.youtube.com/watch?v=AWZyM2UiB18>

Please also consider this video of a laser shows:

<https://www.youtube.com/watch?v=HehU8s6kg-k>

We all know that celebrations bring us together as a community. The desire to end traditional fireworks isn't about stopping celebrations but rather a call to modernize our celebrations. We need to be more mindful of our responsibility to adopt the calls to action within the Truth and Reconciliation report AND switch to more environmentally-friendly means of celebrating. How can the average Londoner be expected to participate in and subscribe to the recommendations

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[https://www.cbc.ca/news/canada/london/fed-up-with-fireworks-maybe-it-s-time-to-fly-up-the-drones-1.6871034?fbclid=IwAR1Bzme-Q\\_GuxHkaddu\\_gQRsBN0wX3O3CRRoXYmH7OZAbezcbPnoilDpmOk](https://www.cbc.ca/news/canada/london/fed-up-with-fireworks-maybe-it-s-time-to-fly-up-the-drones-1.6871034?fbclid=IwAR1Bzme-Q_GuxHkaddu_gQRsBN0wX3O3CRRoXYmH7OZAbezcbPnoilDpmOk)

within the Climate Emergency Action Plan (e.g. Londoners are advised to reduce their 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 resilient to severe weather<sup>11</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)?

I will be directly emailing this document to all CPSC council members but I would also like to include it here for the record. This is a summary of all of the research mentioned in this letter, as well as information on where consumer fireworks bans have been implemented, and environmentally friendly alternatives to fireworks:

[https://docs.google.com/document/d/1hPfhNoEaQeQPgsP9MHY3\\_01DMNC7VEBRp1F6I\\_0yrwA/edit?usp=sharing](https://docs.google.com/document/d/1hPfhNoEaQeQPgsP9MHY3_01DMNC7VEBRp1F6I_0yrwA/edit?usp=sharing)

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 as a means of prioritizing safety and quality of life for both Londoners now, as well as Londoners of future generations. Brampton, Calendon, and even Woodstock have recognized the need for consumer fireworks bans, as have areas in western Canada as well. London should be no exception.

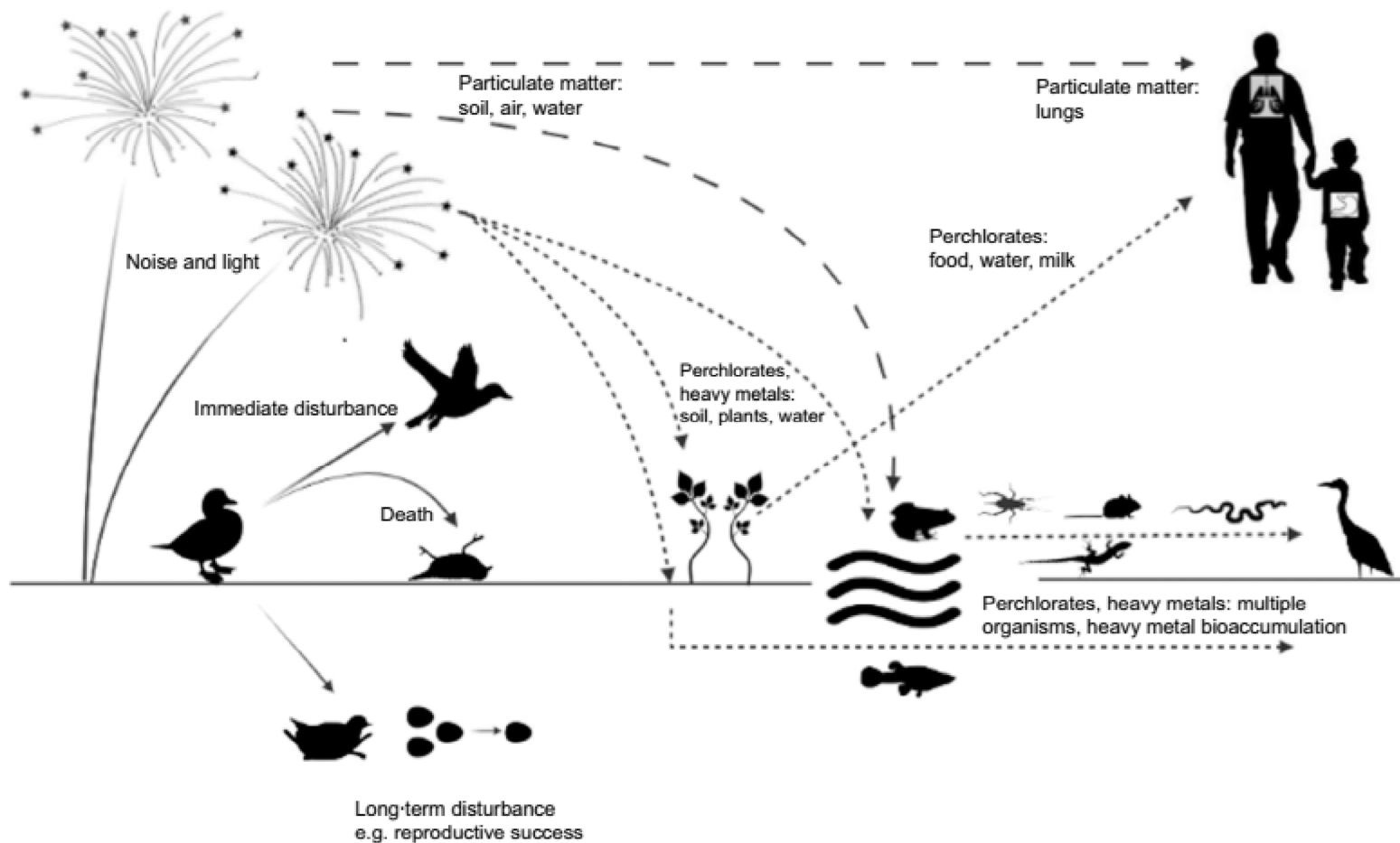
Thank you for your time and consideration.

Kind regards,

Becca Amendola  
*Social Work Student*  
*Co-Founder of Londoners for Quiet Fireworks*

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<sup>11</sup> <https://london.ca/living-london/water-environment/londons-climate-emergency-declaration>



**Fig. 1.** Conceptual diagram of the effects of fireworks on the environment, from immediate disturbance of birds and other animals, through to rapid pollution of air quality by particulate matter, and deposition of perchlorates and heavy metals into soil and water where they can transfer to humans or bioaccumulate in food chains.