

Hello,

Please include the attached pdf file, as well as the following statement as my formal written request for delegation status at the Community and Protective Services Committee meeting on July 26th, 2022:

I am requesting delegation status for the Community and Protective Services Committee meeting on July 26th, 2022 to address the committee regarding the lack of action this year on the calls I made to the CPSC last May 2021 to educate the public on the harms of fireworks. I will be reiterating key points from the delegation made last May 2021 while referring to the pdf I'm submitting with this request with my list of sources.

I will be asking the committee to include some of these basic, research-based environmental and human harms caused by fireworks that I have listed in my sources document in the survey about Londoner's "Thoughts on Fireworks". If Londoners aren't informed about the consequences of fireworks shows, how can they possibly offer informed opinions on what they believe the right decision is? This topic is very relevant to London's Climate Action Emergency, so it can't be a decision strictly made by polling citizens' uninformed opinions.

I would like to request access to the meeting via zoom as I will still be at work when it is scheduled to begin.

Thank you for your time and assistance.

Take care,

Becca Amendola

Fanshawe College Student, Kings University College Student

ACORN London Volunteer

President of EnviroFanshawe Club

Fireworks Ban Research Summary

Locations that have some form of ban on fireworks:

A. Permanent Bans

1. Banff, Alberta, Canada
(<https://www.theglobeandmail.com/canada/article-banff-ditches-big-bang-canada-day-fireworks-to-protect-wildlife/>)
2. British Columbia, Canada (Districts of Sicamous and Campbell River)
(<https://www.saobserver.net/news/district-of-sicamous-to-ban-consumer-fireworks/>)
3. Massachusetts, USA (ban on all consumer fireworks,
<https://www.americanpyro.com/state-law-directory>)
4. Santa Fe, New Mexico, USA
(<https://www.krqe.com/news/new-mexico/city-of-santa-fe-bans-fireworks-puts-other-fire-restrictions-in-place/>)
5. San Francisco Bay Area, California, USA (ban on all consumer fireworks, professional shows allowed
<https://sf-fire.org/fireworks-public-safety-announcement-2010>)
6. Vancouver, Washington, USA
(<https://www.cityofvancouver.us/fire/page/vancouver-fire-department-reminds-residents-about-fireworks-ban-1>)
7. Collecchio, Parma, Italy (ban on all but silent fireworks
<https://www.dailyrecord.co.uk/news/uk-world-news/town-using-silent-fireworks-stop-13532234>)
8. China (444 cities as of January 2018; Began with Beijing in 1986),
(<https://www.reuters.com/article/us-lunar-newyear-china-fireworks-idUSKBN1FV100>)
9. New Delhi, India (ban specific to firecrackers
<https://www.reuters.com/world/india/delhi-orders-ban-pollutive-firecrackers-ahead-diwali-save-lives-2021-09-16/>)
10. Illinois, USA (ban that allows only wire or wood stick sparklers and other novelty items, <https://www.americanpyro.com/state-law-directory>)
11. Vermont, USA (ban that allows only wire or wood stick sparklers and other novelty items, <https://www.americanpyro.com/state-law-directory>)
12. California, USA (In California, ground, and handheld sparkling devices are legal, as are cylindrical and cone fountains, wheel and ground spinners, illuminating torches, and certain flitter sparklers. Anyone 16 or older is able to purchase those, but only from noon on June 28 through noon on July 6. Illegal are things like firecrackers, roman candles, chasers, wire and wooden stick sparklers, and skyrockets.
<https://www.rd.com/article/states-where-fireworks-are-legal/>)

B. Temporary bans within Ontario (to discourage gatherings during COVID lockdowns)

1. Mississauga (reverse for July 1st), Ontario
2. Hamilton, Ontario

3. Oshawa, Ontario
4. Flagstaff, northern Arizona, USA, a new laser light show will replace the standard pyrotechnic display because of concerns about sparking wildfires. Jn. 22, 2022, <https://www.ctvnews.ca/world/some-u-s-cities-nix-july-4-fireworks-for-shortages-fire-dangers-1.5964513>)

Locations where bans have been requested (and who submitted the request):

1. London, Ontario – Rebecca Amendola, 2021
2. Newmarket, Ontario – Rick Butts
(<https://www.thestar.com/local-newmarket/news/2021/06/14/barbaric-and-primitive-newmarket-man-calls-for-fireworks-ban-ahead-of-canada-day.html>)
3. Collingwood, Ontario - Deb Doherty, 2022
(<https://barrie.ctvnews.ca/town-of-collingwood-considers-banning-fireworks-1.5960904>
https://www.collingwood.ca/sites/default/files/docs/2012-064_fireworks_display_consolidated_2021.pdf)
4. Tofino, Vancouver Island – Brent Baker
(<https://www.cheknews.ca/tofino-considering-potential-fireworks-ban-after-complaints-rise-777140/>)
5. Portland, Oregon – Local Fire and Rescue
(<https://www.portland.gov/fire/your-safety/fireworks-banned-portland>)
6. Nova Scotia – Group called Ban Private Fireworks in Nova Scotia
(<http://www.banfireworksnovascotia.org/>)

Alternatives:

1. Pyrotechnics display like you might see at a rock concert (special-effect pyrotechnics)
2. “Low-noise” fireworks, which operate the same as regular ones but without as big of a “boom”
 - a) Silent fireworks are made of vegetable oils, so they are non-toxic (“green crackers”
<https://www.firstpost.com/india/what-are-green-crackers-and-what-makes-them-e-co-friendly-and-less-polluting-10104851.html>)
3. Parades and/or festivals
(<https://www.nsnews.com/local-news/vancouver-bc-fireworks-cancelled-canada-day-2022-5388318>)
4. Annual community drone or laser light show (done in Sydney, Australia)
 - Product example: <https://www.ebay.com/p/691448800> or <https://www.amazon.ca/Uncle-Milton-Fireworks-Light-Show/dp/B0051MMFRS>
Example: **North Star Laser Shows, Waterloo, Ontario**. Put on the Canada Day drone light show for the City of Waterloo, <https://www.northstardroneshow.com>,
(<https://globalnews.ca/news/6061850/waterloo-canada-day-2020/>)

5. Municipal drive-thru light display (examples can be seen as Christmas displays in Waterloo and Niagara Falls)
6. Recyclable confetti poppers (to replace sparklers) (<https://ultimateconfetti.com/>)
7. Laser light show: <https://lasertech-canada.com> out of Montreal. They did the show for the Hyde Park Business Improvement Association's Pond Fest in June 2022.

Reasons for ban:

1. Environmental preservation:
 - (a) Negative impacts on wildlife
 - I. Birds "flee en masse"; the 2010 New Year's celebration in Beebe, Ark., saw 5,000 blackbirds drop out of the sky (source: article on Banff, Alberta listed above)
 - i. Documented cases of ground-nesting birds abandoning their nests and flightless chicks, resulting in permanent separation and eventual death
 - II. Deer fling themselves into roads and cars
 - III. Horses have heart attacks and keel over
 - IV. Some domestic pets develop heart problems, nausea, tremors, debilitating fears, and light-headedness
 - V. Animals may be too close to the explosion and receive burns or eye damage
 - (b) Increase in unnecessary pollution
 - I. Highly toxic gases and pollutants are generated that poison the air, the water, and the soil (concentration of particulate matter in the air is about 42% greater during shows) (<https://www.forbes.com/sites/grrlscientist/2019/12/31/festive-fireworks-create-harmful-pall-of-pollution/?sh=206aa09a2853>)
 - i. Within 1 hour of fireworks displays, strontium levels in the air increased 120 times, magnesium 22 times, barium 12 times, potassium 11 times, and copper (Cu) 6 times more than the amount already present in the air before the event (lithium also used in some fireworks)
 - II. Significantly adds to the total annual concentrations of metal emissions
 - i. Any toxic chemicals added to the environment are permanent and compounding
 - III. Fireworks also add dangerous gases and aerosols to the atmosphere (such as ozone)
 - IV. Chemical reactions in fireworks explosions release smoke and gases such as carbon dioxide, carbon monoxide, and nitrogen (some primary greenhouse gases responsible for climate change)
 - V. Shows increased nitric oxide (NO) and sulfur dioxide (SO₂) levels, (primary contributors to acid rain) which are also primary greenhouse gases that irritate the lungs and throat
 - (c) Increased risk of fires

- I. According to the Office of the Ontario Fire Marshal, fireworks were responsible for 129 fires and almost \$2.5 million in damage in Ontario between 2009 and 2013 (source is the article about Banff, Alberta above)
 - II. Many people don't seem to realize that fireworks are not allowed during a fire ban
2. Health impacts on vulnerable populations
- I. Fireworks send over 9,000 people to the emergency room per year (<https://www.ahchealthenews.com/2019/07/03/fireworks-sent-this-many-people-to-the-emergency-room-last-year/>)
 - i. Inhaled or ingested, these metals can cause a huge variety of short- and long-term reactions, ranging from vomiting, diarrhea or asthma attacks, to kidney disease, cardio-toxic effects, and a variety of cancers
 - ii. Hospital admissions for asthma and other breathing problems peak the day following a show
 - iii. Relative risk of cardiovascular mortality increased to as high as 125.11% and the relative risk for cardiovascular morbidity increased by 175.16% after a show
 - II. Levels of some metals remained elevated above background levels for days after the event as a reservoir of metal-containing dust persisted within the urban area where it can be easily inhaled
 - III. Between 2005 and 2020, there were 136 deaths from fireworks misuse in total or 8.5 deaths per year on average
- Articles about recent deaths caused by fireworks:
- <https://toronto.citynews.ca/2022/06/19/2-men-charged-in-fatal-fireworks-explosion-that-killed-4/> - 4 deaths
 - <https://www.usatoday.com/story/news/nation/2022/07/05/july-4th-fireworks-deaths-2022/7809482001/> - 2 deaths
 - <https://www.latimes.com/california/story/2022-07-05/fireworks-explosion-kills-montebello-man-during-fourth-of-july-celebration> - 1 death
 - <https://nypost.com/2022/07/06/fireworks-blast-kills-california-man-on-july-fourth/> - 1 death
 - <https://www.sacbee.com/news/nation-world/national/article263223493.html> - death
 - <https://www.nytimes.com/2021/06/30/us/fireworks-injuries-july-fourth.html> - 2020 USA states on injuries and deaths
 -
3. Use has increased exponentially:
- I. Importing of fireworks into Canada increased by almost 800% over the last 10 years (<https://www.thelandbetween.ca/living-in-the-land-between/fireworks/>)
 - i. This means all of the above-mentioned negative impacts are also increasing

NOTE: Any approach to a ban will only be possible and successful with significant investment in a robust district-wide education program to teach the public about all of the information listed above – which is completely within the council's means to implement

Greenhouse Gas Emissions:

“As explained by Tree Hugger, fireworks in the U.S. emit about **60,340 metric tons of CO2 every year**. To put that in perspective, that's a bit more than what 12,000 gas-powered cars emit in a year, Tree Hugger noted. Furthermore, fireworks emit a significant amount of ozone, which is also a greenhouse gas, as well as a secondary pollutant, according to a study published in the journal” (<https://www.greenmatters.com/p/fireworks-environmental-impact>)

“. . . **when the fireworks go off, the metal salts and explosives undergo a chemical reaction that releases smoke and gases into the air**. That includes carbon dioxide, carbon monoxide, and nitrogen—three greenhouse gases that are unfortunately responsible for climate change.” (<https://brightly.eco/fireworks-environmental-impact/>)