



From: L. R.S. [REDACTED]
Sent: Wednesday, December 28, 2022 9:05 PM
To: Council Secretary
Subject: Lavinia Rojas- . PLEASE READ IN IT ENTIRETY. Also attached pdf of Office of the Depute Chief Constable.
Attachments: Police copy.pdf

From ANIMAL ETHICS .

How fireworks harm nonhuman animals

Fireworks and other explosive materials, whose reactions can produce sparks, flames, and fumes, cause various harms to nonhuman animals. These often affect animals who are human companions, and whose reactions we can easily see. They also harm the other animals who are around us, both in urban environments and outside them, as well as those who are on farms or confined in other spaces.

Physical damage to the hearing organs of animals

The hearing of many animals is much more sensitive than it is in humans, so the explosions of fireworks are not only more disturbing to them, but they can damage their hearing more severely. Fireworks can emit sounds of up to 190 decibels (110 to 115 decibels above the range of 75 to 80 decibels where the damage to the human ear begins). Fireworks generate a higher noise level than firecrackers, gunshots (140 decibels), and some jet planes (100 decibels).

Noises caused by fireworks and firecrackers can lead to loss of hearing and tinnitus. Dogs are known to suffer irreversible hearing loss caused by proximity to the noise of gunfire.

Fear and stress

In addition to these harms, the noises caused by fireworks harm animals by causing fear. In fact, repeated exposure to unexpected, unpredictable loud noises can cause phobias in many animals, increasing panic reactions to loud noises in the future.^{[1](#)}

It is estimated that one-fifth of disappearances of animals who are companions to humans are due to very loud sounds, mainly fireworks and storms.[2](#)

The effects of fireworks on animals can be observed very clearly in zoos.[3](#) It has been shown that the noise of fireworks makes animals such as rhinos and cheetahs very nervous, also visibly affecting others such as elephants, while rodents continue running minutes after the noises cease.[4](#)

Harmful effects by chemical particles

In addition, firecrackers are poisonous, and their explosion releases harmful particles such as fine dust (PM10) that is toxic to inhale. It can worsen existing diseases and cause others. Therefore, fireworks represent a danger both to animals who live in areas where they explode, or in relatively distant locations when the wind transports the particles.[5](#) There is also a risk of ingestion of the residue of fireworks and firecrackers.[6](#) The proximity of the animals to the areas where the firecrackers are made often causes burns and damage to the eyes.

The chemicals are also dangerous for cats and dogs, just as they are for humans with respiratory diseases such as asthma. Careless use of fireworks can also cause mutilations and fatal accidents in animals near the event, as well as causing fires that harm animals. When accidents of this type occur that affect humans, it is common for us to talk about it, but we must remember such things often affect animals of other species even when humans aren't badly affected.

Ways different animals are affected by fireworks

Dogs

Dogs are able to hear up to 60,000hz, while humans can't hear anything above 20,000hz, which is only a third of the capacity of dogs. This auditory acuity of dogs is one of the reasons the sound of fireworks can be so harmful to them. They show signs of overwhelming anxiety as they are unable to escape from the sound.[7](#)

Dogs, like many other animals, also suffer from other phenomena that produce loud sounds, such as storms. However, in the case of storms, the noises are accompanied by previous warning signs, so that animals can perceive them in advance. This can cause them anguish in anticipation, but it does not cause them the unexpected fright caused by fireworks, which are sudden and not identifiable.[8](#) The fear of noise among older dogs is more common.[9](#)

Many urban dogs suffer negative symptoms from the explosions of firecrackers. Common reactions are freezing or paralysis, uncontrolled attempts to escape and hide, and tremors. Other more intense signs may also be present, such as salivation, tachycardia, intense vocalizations, urination or defecation, increased activity, hyper alertness and gastrointestinal disorders. All these signs are indicative of great discomfort.

It has been pointed out that the reaction of dogs to the sound of fireworks is similar to post-traumatic stress in human animals. However, this effect could be much more harmful in dogs, because they do not have the ability to rationalize their anxiety, or the possibility of an immediate cognitive response that allows them to respond to their fear. It is likely they experience a deeper and more intense form of terror. This is in addition to the noise phobia which can be greater in some dogs due to personality differences. It is important to keep in mind that in the first years of their lives, dogs are especially vulnerable to the development of phobias, and exposing them to sounds like fireworks contributes to future fear responses that they might not otherwise have had. It has been estimated that one in two dogs has significant fear reactions to fireworks.[10](#)

Cats

The effects of fireworks on cats are less obvious, but their responses are similar to those of dogs, such as trying to hide or escape.[11](#) However, regardless of the fear they have, they have a higher risk of being poisoned. Many cats who are near areas where firecrackers are made ingest them or their parts. In addition, they can go blind or be seriously injured by the explosions of firecrackers.

Horses

Horses can easily feel threatened by fireworks due to their hypervigilance since they are constantly on high alert due to possible predators.[12](#) Horses also act quite similarly to dogs and cats, showing signs of stress and fear, and trying to flee or escape. It is estimated that 79% of horses experience anxiety because of firecrackers, and 26% suffer injuries from them. Sometimes they react to fireworks by trying to jump fences and flee to dangerous areas where they can be run over by cars.[13](#)

Birds

The noise of firecrackers can cause birds tachycardia and even death by fright. The high degree of stress birds experience is indicated by the fact that birds may temporarily or permanently abandon the places where they are.[14](#)

In areas that are aircraft flyover zones, Creole ducks grow more slowly and have a lower body weight than Creole ducks who live in areas with little noise. Snow geese affected by these noises spend less time eating during the day and try to compensate during the night, which entails shortening their period of rest and sleep, gradually reducing their survival rate.¹⁵

Disorientation and panic from fireworks can cause birds to crash into buildings or fly towards the sea. The colonial species of birds who nest in high densities, such as silver gulls, are at greater risk of this during explosions of firecrackers. Many birds who flee from their nests due to the sounds do not know how to return to their nests once the noise ends, which leaves many of their young helpless.

Invertebrates and small vertebrates

The harms caused to invertebrates and small vertebrates have been evaluated much less than those caused to the animals discussed above. Presumably, these animals can do little to avoid harm if the explosions occur in areas near where they live. Keep in mind that for these animals fireworks are very large explosions, so the harms to them can be much greater than in other animals.¹⁶

Alternatives to the use of fireworks

There is a growing acceptance of alternatives to fireworks, such as laser light shows. One notable case is in the city of Collecchio (Italy), one of the first to program silent fireworks, with the message that it is possible to enjoy fireworks without causing panic among the nonhuman inhabitants of the municipality. However, there is the possibility that this type of show may affect birds negatively.

Some might think that administering a soothing drug to animals could be the solution, but this proposal isn't satisfactory for two reasons. First, the use of drugs to calm animals could cause harmful side effects. Second, we wouldn't be able to reach almost all of the animals affected by fireworks. The animals who live with human beings are not the only ones harmed. Even if we only consider domesticated animals in urban areas, there are animals who live in the street or are alone. In addition, domesticated animals are the minority of animals affected. We must take into account all animals who live outside the reach of humans, whether in the wild or in urban environments, as well as those on farms and other places where they are exploited. For this reason, the only really satisfactory solution is to reject the use of fireworks.

Further readings

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Notes

- 1 British Small Animal Veterinary Association (2019) "[Fireworks](#)", BSAVA [accessed on 18 June 2019].
- 2 American Society for the Prevention of Cruelty to Animals (2015) "[Independence Day can be perilous for pets](#)", ASPCA, June 25 [accessed on 27 February 2019].
- 3 In one case, the noise caused by nearby works were a cause of stress for snow leopards kept in zoos. They withdrew to the most remote parts of their exhibition area, and spent more time sleeping than on the days when there was no noise. We can imagine the harm caused by much more thunderous sounds, such as those caused by fireworks. Sulser, E.; Steck, B. L. & Baur, B. (2008) "Effects of construction noise on behaviour of and exhibit use by snow leopards *Uncia uncia* at Basel zoo", *International Zoo Yearbook*, 42, pp. 199-205.
- 4 Rodewald, A.; Gansloßer, U. & Kölpin, T. (2014) "Influence of fireworks on zoo animals: Studying different species at the zoopark erfurt during the classic nights", *International Zoo News*, 61, pp. 264-271.
- 5 Greven, F. E.; Vonk, J. M.; Fischer, P.; Duijm, F.; Vink, N. M. & Brunekreef, B. (2019) "[Air pollution during New Year's fireworks and daily mortality in the Netherlands](#)", *Scientific Reports*, 9 [accessed on 11 June 2019].
- 6 Stanley, M. K.; Kelers, K.; Boller, E. & Boller, M. (2019) "Acute barium poisoning in a dog after ingestion of handheld fireworks (party sparklers)", *Journal of Veterinary Emergency and Critical Care*, 29, pp. 201-207.
- 7 Blackwell, E. J.; Bradshaw, J. W. & Casey, R. A. (2013) "Fear responses to noises in domestic dogs: Prevalence, risk factors and co-occurrence with other fear related behaviour", *Applied Animal Behaviour Science*, 145, pp. 15-25.
- 8 Franzini de Souza, C. C.; Martins Maccariello, C. E.; Martins Dias, D. P.; dos Santos Almeida, N. A.; Alves de Medeiros, M. (2017) "Autonomic, endocrine and behavioural responses to thunder in laboratory and companion dogs", *Physiology & Behavior*, 169, pp. 208-215.
- 9 Storengen, L. M. & Lingaas, F. (2015) "Noise sensitivity in 17 dog breeds: Prevalence, breed risk and correlation with fear in other situations", *Applied Animal Behaviour Science*, 171, pp. 152-160.
- 10 Hargrave, C. (2018) "Firework fears and phobias in companion animals – why do we let owners take the one in two chance?", *The Veterinary Nurse*, 9, pp. 392-392.
- 11 *Ibid.*

[12](#) British Horse Society (2018) "[Fireworks](#)", *Advice & Information, British Horse Society* [accessed on 30 April 2019].

[13](#) Gronqvist, G.; Rogers, C. & Gee, E. (2016) "[The management of horses during fireworks in New Zealand](#)", *Animals*, 6 (3) [accessed on 2 January 2019].

[14](#) Schiavini, A. (2015) [Efectos de los espectáculos de fuegos artificiales en la avifauna de la Reserva Natural Urbana Bahía Cerrada](#), Ushuaia: Centro Austral de Investigaciones Científicas [accessed on 26 June 2019].

[15](#) Conomy, J. T.; Dubovsky, J. A.; Collazo, J. A. & Fleming, W. J. (1998) "Do black ducks and wood ducks habituate to aircraft disturbance?", *Journal of Wildlife Management*, 62, pp. 1135-1142.

[16](#) Morley, E. L.; Jones, G. & Radford, A. N. (2014) "[The importance of invertebrates when considering the impacts of anthropogenic noise](#)", *Proceedings of the Royal Society B: Biological Sciences*, 281 (1776) [accessed on 3 December 2020]. Studies have also been conducted on the effects of noise on marine invertebrates, due to their economic interest. Hawkins, A. D.; Pembroke, A. E. & Popper, A. N. (2015) "Information gaps in understanding the effects of noise on fishes and invertebrates", *Reviews in Fish Biology and Fisheries*, 25, pp. 39-64; Nedelec, S. L.; Radford, A. N.; Simpson, S. D.; Nedelec, B.; Lecchini, D. & Mills, S. C. (2014) "[Anthropogenic noise playback impairs embryonic development and increases mortality in a marine invertebrate](#)", *Scientific Reports*, 4 [accessed on 1 December 2020].

Lavinia Rojas

Victoria, BC

V8V 1S9



OFFICE OF THE DEPUTY CHIEF CONSTABLE

850 CALEDONIA AVENUE VICTORIA, BRITISH COLUMBIA, CANADA V8T 5J8 T: 250.995.7215 F: 250.384.1362

December 11, 2020

Ms. Lavinia Rojas

Via email

Ms. Rojas:

In response to your email of November 5th to Chief Manak, thank you for reaching out to the Victoria Police Department regarding your efforts to ban fireworks in British Columbia.

The municipalities within our service area have bylaws that prohibit the possession and use of fireworks without a permit. The introduction of these bylaws resulted in an improvement in the number of fireworks-related complaints received by police; however, we continue to receive complaints from the public. Between October 1 and November 5, 2020, we received at least 60 reports from the public that relate to the actual or suspected use of fireworks. In many of these cases, members of the community are concerned about the noise they create and others are concerned about dangerous use. In a few of the cases, fireworks have been confused for gunfire.

The Victoria Police Department is actively looking for ways to reduce the incidents of calls for service so that our officers can focus on the most serious public safety priorities. We support the exploration of legislative changes that result in improved community safety and well-being.

Thank you for your efforts on behalf of our communities.

Sincerely,

Colin Watson
Deputy Chief of Administration

Safari File Edit View History Bookmarks Window Help Tue Dec 27 4:05 AM


petitions.ourcommons.ca

Petition e-3591 - Petitions

Presented to the house of commons
Laurel Collins (Victoria)
March 23, 2022 (Petition No. 441-00242)

Government response tabled
May 6, 2022

Member of Parliament



Laurel Collins
Victoria
New Democratic Party Caucus
British Columbia

14075 signatures

Only validated signatures are counted towards the total number of signatures.

Province / Territory	Signatures
Alberta	320
British Columbia	11629

Privacy - Terms

Mac OS dock with various application icons including Safari, Messages, Firefox, Calendar, Photos, Music, App Store, and System Preferences.

From: L. R.S. [REDACTED]
Sent: Wednesday, December 28, 2022 9:02 PM
To: Council Secretary
Subject: Lavinia Rojas -. Please read in its entirety.

FROM ""ONTARIO NEWS"

Protecting Ontario's Lakes From Fireworks

As fireworks explode on December 31st flocks of wintering birds also explode into the air in panic. They become disoriented, bang into windows or trees, fly too high and too long wasting energy and warmth. Concern for birds and elk on the Bow River has caused Banff, Alberta [to replace fireworks](#) with low-altitude, low-noise pyrotechnic displays.

Now, as we make our New Year's resolutions, some of us are thinking about summertime and the excess of fireworks on our Ontario lakes.

On the first of July weekend the noise from fireworks is intense, the colours incessantly exploding above the lake. One year, a phoebe crashed into our window desperate to escape the unnatural noise and crazy light. It makes us think of the whip-or-wills which call close to our cottage on June and July nights. We feel so fortunate to have them.

What does this human-made extremity of noise, light and colour do to the loons, herons and osprey that live on our lake? What about the nesting phoebes, scarlet tanagers and indigo buntings, or the chipping sparrow, redstarts, sapsuckers hummingbirds and great flycatchers? Are the chipmunks cowering underground, the nocturnal flying squirrels unable to search for food? How do mink and raccoons and beavers react? When the spent firecrackers land in the water, how does this affect sunfish, bass, trout and muskies?

Many animals have more acute hearing and smelling than humans; so the effect of fireworks is magnified for them. One year as fireworks set the dogs around howling, our son's small dog escaped out the back door heading for the city. Animals may become disoriented. Animal shelters report an increase in roadkill and injured animals after a firework event.

Dr. David Noakes, a zoologist at the University of Guelph, Ontario, points out that the combined responses to fireworks of [panic and disorientation](#) can cause birds to fly into a building or too far out to sea. According to studies conducted by the University of Guelph and the U.S. Fish and Wildlife Services, fireworks can cause [nesting birds to abandon their nest](#) in confusion. Dr. Ian Duncan, a University of Guelph ethologist, [has demonstrated](#) that laying hens show extremely low egg production the day after fireworks and the eggs are often malformed.

[Researchers at Acadia University](#), Nova Scotia, found that colonial species of birds who nest in high densities, such as the herring gull, are most at risk during a round of firecracker explosions. After

a loud bang, most birds fly away in fright, and the nesting mothers of the flock sometimes cannot find their own nest upon return, endangering the well-being of nestlings. [A study in the Netherlands](#) using radar tracked thousands of birds fleeing en masse during New Year's Eve celebrations becoming disorientated, wasting energy. According to the [National Fire Protection Association](#), 32,300 fires were started by fireworks between 2000 and 2004 on July 4th-related events.

Gunpowder that fuel the explosions and metallic compounds that colour the show rain down on land, river and lakes. These metals include cadmium, a known carcinogen, strontium for red colour, aluminum (white), copper (blue), barium (green) and rubidium (purple). We reduce emissions on diesel vehicles and emissions from factories, but fireworks emissions are unchecked. Are we violating our Clean Air Act? Does our Clean Air Act even deal with fireworks?

Sure, fireworks are fun! People come in boats to watch around the small island on our lake for the annual show. They cheer as the explosions intensify. The show gets bigger and better every year. But how much is enough? And how often is enough? Almost every summer weekend we hear fireworks somewhere on the lake.

If we decide fireworks should be restricted, how do we begin? Most lakes have a cottage association where people we can introduce the subject. Change begins with awareness. [The Township of North Kawartha](#) has drafted a bylaw to limit fireworks to five weekends a year. This is to be voted on at their next board meeting.

Kids love fireworks. Some adults too. These are hard decisions. But let's put the questions out there. Do we opt for the oohs and aahs of these explosions of noise and coloured light? Or do we opt for lakes that are safe for fish, loons, osprey, herons, nesting phoebes and the other animals we share our ecosystems with?

Lavinia Rojas

VICTORIA BC

V8V 1S9

December 15, 2020

Lavinia Rojas
803-647 Michigan Street
Victoria, BC V8V 1S9

Dear Lavinia,

Please accept this letter of support for your petition to ban the use of fireworks in the province of British Columbia. The BC SPCA considers fireworks to be a serious animal welfare issue for pets, farm animals and wildlife in our communities:

- Fireworks can spook pets and cause them to panic, run away (including escaping out partially open or screened windows) and dart into traffic. Incidences of lost pets increase markedly during and after fireworks displays. Pets can also seriously injure themselves in their attempts to escape.
- Roughly 49 per cent of dogs are fearful of loud noises such as fireworks.¹ Dogs who are normally friendly can sometimes act out of character due to fear, placing members of the public, including children, at risk.
- Approximately 79 per cent of horses display anxious behaviour during fireworks displays.² Spooked horses can easily break through fences, receiving serious injuries including lacerations, sprains and even broken limbs as a result.
- In recent years, fireworks have been demonstrated to have a negative impact on bird and marine mammal behaviour.^{3,4} In urban areas, birds and other wild animals can be scared from

¹ Blackwell, E. J., Bradshaw, J. W. S., & Casey, R. A. (2013). Fear responses to noises in domestic dogs: Prevalence, risk factors and co-occurrence with other fear-related behaviour. *Applied Animal Behaviour Science* 145(1-2), 15-25. <https://doi.org/10.1016/j.applanim.2012.12.004>

² Gronqvist, G., Rogers, C., & Gee, E. (2016). The management of horses during fireworks in New Zealand. *Animals* 6(3), 20. <https://doi.org/10.3390/ani6030020>

dens and roosting sites, causing them to fly into buildings or run into busy streets to be injured or killed. Those that remain unharmed are still disturbed, leading to reductions in their natural feeding and breeding behaviours, as well as abandonment of their young in nests or dens.

- In addition to the above consequences, harmful smoke and garbage waste from fireworks are secondary threats to the health of local wildlife. Pets can also be poisoned from ingesting fireworks.⁵

Thank you for recognizing the needs of the animals with whom we share our communities when considering an end to fireworks provincially. Should you have any questions, I can be reached at [REDACTED]

Sincerely,



Meghann Cant
Manager, Companion Animal Welfare Science & Policy

³ Shamoun-Baranas, J., Dokter, A. M., van Gasteren, H., van Loon, E. E., Leijnse, H., & Bouten, W. (2011). Birds flee en mass from New Year's Eve fireworks. *Behavioural Ecology* 22(6), 1173-1177. <https://doi.org/10.1093/beheco/arr102>

⁴ Pedreros, E., Sepúlveda, M., Gutierrez, J., Carrasco, P., & Quiñones, R. A. (2016). Observations of the effect of a New Year's fireworks display on the behavior of the South American sea lion (*Otaria flavescens*) in a colony of central-south Chile. *Marine and Freshwater Behaviour and Physiology* 49(2), 127-131. <http://dx.doi.org/10.1080/10236244.2015.1125099>

⁵ Gahagan, P., & Wismer, T. (2018). Toxicology of explosives and fireworks in small animals. *Veterinary Clinics of North America: Small Animal Practice* 48(6), 1039-1051. <https://doi.org/10.1016/j.cvsm.2018.06.007>

[REDACTED]

From: L. R.S. [REDACTED]
Sent: Monday, January 2, 2023 3:28 PM
To: Council Secretary
Subject: From Lavinia Rojas. Please pass this email to Council. Thank you.

This is the proposed Resolution:

WHEREAS:

- Wildfires are a growing concern across Canada and fireworks have been documented to be sources of wildfire ignition;
- Consumer use of fireworks has caused significant structure fires and even human deaths both in manufacturing warehouses and on private properties;
- Fireworks are a source of pollution and toxic debris, and can adversely impact environmental and human health through water and soil contamination, and reduced air quality;
- Fire and police are stretched to respond to misuse of fireworks calls, particularly on holidays, affecting their ability to respond to other public safety concerns;
- Public Health Infobase Canada reports that the most common type of injuries related to fireworks are burns;
- Fireworks can traumatize refugees and veterans with post-traumatic stress disorder and those with sensory difficulties;
- National parks are transitioning from fireworks displays to special effect pyrotechnics to reduce the impact on wildlife;
- Animal welfare organizations across Canada consider fireworks to be a serious health and welfare risk to pets, farm animals and wildlife;
- Animal welfare organizations further explain that fireworks cause death, illness, injury, and stress to animals in our communities;

Lavinia Rojas
V8V 1S9

[REDACTED]

From: L. R.S. [REDACTED]
Sent: Tuesday, January 3, 2023 12:53 PM
To: Council Secretary
Subject: Lavinia re video

[REDACTED] [REDACTED]

Hello Madison; is it possible to show a video? If so, it is laser and other technology used instead of fireworks. This was from Seattle USA.

<https://www.youtube.com/watch?v=3Ow0ET-ob3E>

Thank you,

Lavinia Rojas