

The Devastating Impacts of Fireworks on the Environment

Everyone enjoys a good light show when celebrating holidays and long weekends – but did you know that fireworks can have harmful effects on wildlife and the surrounding environment?



*As of 2018, the township of Banff Alberta has decided to ditch fireworks in a vow to protect the environment and wildlife
(Photo Credit: iStock, Getty Images)*

According to figures provided by the Office of the Ontario Fire Marshal, fireworks were blamed for 129 fires and almost \$2.5 million in damage in Ontario between 2009 and 2013. In addition to property damage, research studies show that the loud sounds of fireworks can cause a great amount of fear, stress and anxiety in wild animals. Animals such as birds and other small mammals are often reported abandoning their nests leaving their defenceless babies behind due to the trauma that they experience from the loud bangs of combustion. The panic of the ordeal can cause

disorientation, decreasing the ability for wildlife to locate their homes.

In addition to noise, fireworks can also expose both humans and animals to toxic chemicals from the smoke upon combustion. Scientists from the Meteorological Service of Canada concluded that “studies are needed to document exposure to species of the elements emitted by fireworks and to assess the toxicity of particles of various chemical compositions in inhaled fireworks smoke” (*Atmospheric Environment*, 2010). Upon combustion, many chemicals and small minerals are

released into the air. Leftover particles that fall to the ground can pollute waterways and pose as a risk to both wildlife and humans.

Places around the world are taking action to reduce the negative impacts of fireworks. Beijing, China has outlawed the use of fireworks completely, as the risk of air pollution is too high. Collecchio, Italy has switched to silent fireworks to reduce anxiety among animals. Similarly, Banff, Alberta has cut out the use of fireworks for large celebrations all together due to the adverse effects on local wildlife.

While fireworks can be dangerous to wildlife, there are ways that you can reduce your impact if you do still choose to use them. Here are a few safety tips to minimize the dangers to wildlife and the environment:

- Use fireworks that produce less noise among combustion, unfortunately Canada has yet to sell completely noiseless fireworks, but you can ask your fireworks salesperson for ones that make less noise
- Wait until well after dusk to ignite fireworks, late evening is prime feeding time for many animals- especially deer, after it gets dark there will be fewer animals nearby to be affected by the disruption
- Clean up all firework residue promptly and thoroughly to avoid toxic chemicals and other poisons harmful to animals if they ingest them
- Avoid using fireworks near trees, bird houses, known nesting areas, or other sheltered areas where wildlife might be living
- Remove bird feeders prior to lighting fireworks to discourage birds from being nearby during the light show
- Try and use fireworks in areas that are less vulnerable to chemical pollutants and easier to clean up (such as open fields rather than waterways and lakes)

Enjoy responsibly, keep the environment and local wildlife safe from harm. Or better yet, opt for a different form of entertainment.

To learn more, please visit:

<https://www.nrcan.gc.ca/explosives/fireworks-use/9883>

<https://www.terrapass.com/fireworks-impact-environment>

Bienen, L. (2006). Chinese Fireworks Spark Pollution Controversy. *Frontiers in Ecology and the Environment*, 4(10), 510-510. Retrieved from <http://www.jstor.org.cat1.lib.trentu.ca:8080/stable/3868894>

<https://www.theglobeandmail.com/canada/article-banff-ditches-big-bang-canada-day-fireworks-to-protect-wildlife/>