

It has been 57 years since Rachel Carson's *Silent Spring*, a book urging governments and people to stop the use of chemicals to deter 'pests' and control nature. At the height of the chemical revolution, DDT was seen as a key component in humanity's 'battle against nature'. Leftover chemicals from the war were used on agricultural crops, gardens and even inside homes; but what were some of the implications of this chemical?



Videos from the late 40s show DDT being sprayed on children in a pool, to showcase how 'safe' it was for use in the home and around humans. Source: <https://www.youtube.com/watch?v=kbcHszMCIJM&t=28s>

Studies found that DDT exposure was the cause of 15% of infant deaths in the US in the 1960s (New Scientist, 2001). It had adverse effects on wildlife, such as the disruption of bird reproduction, and the dramatic decline in pollinator species. Further studies found that people who swallowed large amounts of DDT had tremors and seizures, experiencing sweating, headaches, nausea, vomiting, and dizziness (Agency for Toxic

Substances & Disease Registry, 2002). These effects on the nervous system went away once exposure stopped. The same type of effects would be expected by breathing DDT particles in the air, or by contact of the skin. Based on all of the evidence available, the Department of Health and Human Services deemed that DDT was reasonably anticipated to be a human carcinogen. Similarly, the International Agency for Research on Cancer (IARC), and EPA deemed that DDT was possibly carcinogenic to humans, leading to the banning of the chemical in the 1970s. DDT was originally synthesized in 1874 and banned nearly 100 years later.

Despite the lessons learned from the prolonged use of chemicals such as DDT, many permitted pesticides and insecticides used today have minimal research that

deem them safe to humans and wildlife. For example, Ontario hydro companies use herbicides to clear woody debris and vegetation from hydro poles rather than manually removing hazards. One of the dangers of using these chemicals is that they can contaminate nearby waterbodies and ground water supplies. When it rains, any

setback can be quickly made null and void, because any chemicals that have been recently applied to lawns can run off into the lake, or river, posing risks to the aquatic environment. Similarly, paints and insecticides applied to boats and watercraft can contaminate water upon contact, negatively affecting fish species. For instance, one of the most common ingredients in herbicides such as in Garlon (TM) spray includes *triclopyr*. *Triclopyr* is a selective systemic herbicide used to control woody and herbaceous broadleaf plants along right-of-ways, in forests, and in grasslands and parklands. Because studies into the carcinogenicity of *triclopyr* have produced conflicting results, EPA has categorized *triclopyras* a "Group D" compound, or a chemical that is not classifiable as a human carcinogenic. Therefore, despite the potential effects of a chemical such as *triclopyr*, it is still permitted as safe. This same type of thinking allowed DDT to be used freely for nearly a century, causing years of damage to wildlife, humans and the environment.



An image from Time Magazine released in 1947, assures users that DDT is not only safe but good for humans.

So how does this affect The Land Between?

The Land Between is specifically at risk because of the large amounts of waterbodies that are immediately connected to all adjacent upland spaces and backyards. Also because there is limited soil in most areas across the region to absorb any contaminants before they reach the surface waters, and before they reach below ground aquifers.

Garlon has fallen under scrutiny for several months in The Land Between, particularly in Dysart et al. While other municipalities in the region have banned the use in their jurisdictions and even use by Hydro One, because the product is known to be highly toxic to aquatic habitats if it gets into water bodies, Dysart seems on the fence. The toxicity was what originally prompted Dysart et al to consider banning Hydro One's use of the substance, however recently deliberations have resulted in the decision to stave

off banning it. Read about the recent decision to reverse this ban [here](#). Similarly, the Muskoka region has faced struggles with Hydro One spraying Garlon and posing risks to aquatic habitats. They ended up banning the toxic chemical and gave the authority to residents to say no to chemical applications of Garlon by Hydro One on their properties.

If you are concerned about the environment and the spraying of toxic chemicals nearby you, or in your hometown, or even your watershed, please contact your municipality or Hydro One directly. Also it is suggested by some that landowners can also request directly to Hydro One, if the company is working on their property, that they do not spray but cut the woody growth instead- again this is only on individual private properties.

References and Further Reading

<http://www.popstoolkit.com/about/chemical/ddt.aspx>

<https://www.atsdr.cdc.gov/toxprofiles/tp35-c6.pdf>

<http://www.scienceclarified.com/Co-Di/DDT-dichlorodiphenyltrichloroethane.html>

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<https://www.muskokaregion.com/news-story/3616427-hydro-one-spraying-garlon-herbicide-in-muskoka/>

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